

# LBT-A37CDM/D259CD/D309CD/D359CD

## SERVICE MANUAL

*Canadian Model*  
LBT-D259CD

*AEP Model*  
LBT-D259CD/D309CD/D359CD

*UK Model*  
LBT-D259CD/D359CD

*E Model*

*Australian Model*

*PX Model*  
LBT-A37CDM

These systems are composed of following models.  
As for the service manual, it is issued for each component model, then, please refer to it.

### COMPONENT MODEL NAME FOR THESE SYSTEM

	A37CDM			D259CD			D309CD		D359CD	
	E	AUS	PX	AEP	UK	CND	AEP	G/EE/CIS	AEP	UK
Compact disc deck	HTC-D359			HTC-D259			HTC-D309		HTC-D359	
Stereo FM•AM receiver	STR-A37			STR-D259			STR-D309		STR-D359	
Turntable	—			PS-LX52P		—	PS-LX52P (Except for EE, CIS)			
Speaker system	SS-D270				SS-D170		—			

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

### PARTS LIST

EE : East European model  
CND: Canadian model  
G : German model  
AUS: Australian model

Parts No.	Description	Remarks
1-465-963-11	COMMANDER, STANDARD (RM-S271) (D259CD)	
1-466-982-11	COMMANDER, STANDARD (RM-S309) (except D259CD)	
1-501-374-11	ANTENNA, LOOP	
1-501-536-11	ANTENNA (AEP, G, EE, CIS)	
1-690-727-11	CORD (SPEAKER) (A37CDM)	
1-696-860-11	CORD, CONNECTION 13P	
3-707-584-01	COVER, BATTERY (FOR RM-S271)	
3-707-584-21	COVER, BATTERY (FOR RM-S309)	
3-756-332-11	MANUAL, INSTRUCTION (D309CD:AEP) (English, French, Spanish, Portuguese)	
3-756-332-41	MANUAL, INSTRUCTION (D309CD:AEP, G) (German, Dutch, Swedish, Italian)	
3-756-332-51	MANUAL, INSTRUCTION (D309CD:EE, CIS) (English, German, Polish, Russian)	
3-756-333-11	MANUAL, INSTRUCTION (D259CD:UK) (English)	
3-756-333-31	MANUAL, INSTRUCTION (CND) (English, French)	
3-756-333-41	MANUAL, INSTRUCTION (D259CD:AEP) (English, French, Spanish, Portuguese)	
3-756-333-51	MANUAL, INSTRUCTION (D259CD:AEP) (German, Dutch, Swedish, Italian)	

Parts No.	Description	Remarks
3-756-334-11	MANUAL, INSTRUCTION (D359CD:UK) (English)	
3-756-334-41	MANUAL, INSTRUCTION (D359CD:AEP) (English, French, Spanish, Portuguese)	
3-756-334-51	MANUAL, INSTRUCTION (D359CD:AEP) (German, Dutch, Swedish, Italian)	
3-756-334-71	MANUAL, INSTRUCTION (A37CDM) (English, French, Spanish, Chinese)	
* 4-956-900-01	CUSHION (UPPER) (D309CD)	
* 4-956-901-01	CUSHION (MIDDLE) (D309CD)	
* 4-956-902-01	CUSHION (LOWER) (D309CD)	
* 4-956-907-01	INDIVIDUAL, CARTON (D309CD:AEP, G)	
* 4-956-908-01	INDIVIDUAL, CARTON (D259CD:UK)	
* 4-956-909-01	INDIVIDUAL, CARTON (D359CD:UK)	
* 4-957-526-01	INDIVIDUAL, CARTON (D259CD:AEP)	
* 4-957-538-01	INDIVIDUAL, CARTON (CND)	
* 4-957-634-01	INDIVIDUAL, CARTON (D359CD:AEP)	
* 4-957-635-01	INDIVIDUAL, CARTON (A37CDM:AUS, PX)	
* 4-957-636-01	INDIVIDUAL, CARTON (A37CDM:E)	
* 4-958-549-01	CUSHION (D259CD, D359CD, A37CDM)	
* 4-960-227-01	INDIVIDUAL, CARTON (D309CD:EE, CIS)	

## COMPACT HI-FI STEREO SYSTEM

# SONY®

English

# HTC-D209/D309

## SERVICE MANUAL

*AEP Model  
UK Model  
E Model  
Australian Model*



HTC-D209 is the compact disc deck in LBT-A27CD / A27CDK / D209CD.  
HTC-D309 is the compact disc deck in LBT-A37CD / A37CDK / D309CD.

Photo: HTC-D209

### SPECIFICATIONS

#### Cassette deck

Recording system 4-track 2-channel stereo  
Frequency response DOLBY NR OFF  
With Type II cassette (Sony UX-S)  
40 Hz to 14 kHz ( $\pm 3$  dB)  
With Type I cassette (Sony HF-S)  
40 Hz to 13 kHz ( $\pm 3$  dB)  
Wow and flutter W.PEAK  $\pm 0.2\%$  (DIN)

#### Compact disc player

Laser Semiconducotr laser ( $\lambda = 780$  nm)  
Laser output Max,  $44.6 \mu\text{W}^*$   
\* This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.  
Frequency response 2 Hz to 20 kHz  $\pm 0.5$  dB  
Signal-to-noise ratio More than 93 dB  
Dynamic range More than 90 dB  
Harmonic distortion Less than 0.008% (1 kHz)  
Channel separation More than 90 dB (1 kHz)

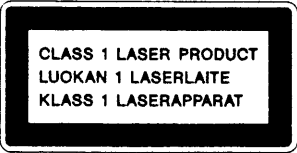
Mass Approx. 5.1 kg  
Dimensions Approx. 355  $\times$  225  $\times$  305 mm  
(w/h/d, including projections)

CD Section	Model Name Using Similar Mechanism		HCD-D109
	Base Unit Name		BU-5BD1
DECK Section	Model Name Using Similar Mechanism		HCD-H170/H170K /H700
	Tape Transport Mechanism	DECK A	TCM-190RA12CL
	Type	DECK B	TCM-190RB22CL

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
"DOLBY" and the double-D symbol  $\square\square$  are trademarks of Dolby Laboratories Licensing Corporation.

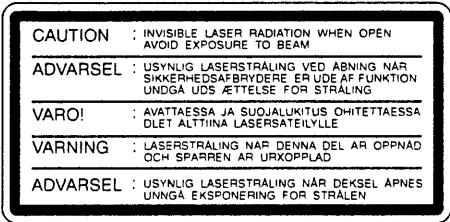
COMPACT DISC DECK  
**SONY**<sup>®</sup>

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.



NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts. The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

SAFETY-RELATED COMPONENT WARNING!!



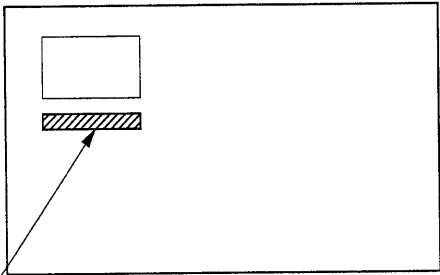
COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
	Specifications .....	1
	Notes on Handling the Optical Pick-up Block or Base Unit .....	2
	Notes on Laser Diode Emission Check .....	2
<b>1.</b>	<b>GENERAL</b> .....	3
<b>2.</b>	<b>ADJUSTMENTS</b>	
2-1.	Mechanical Adjustments .....	4
2-2.	Electrical Adjustments .....	4
	Cassette Deck Section .....	4
	CD Section .....	7
<b>3.</b>	<b>DIAGRAMS</b>	
3-1.	CD Section Block Diagram .....	9
3-2.	Cassette Deck Section Block Diagram .....	11
3-3.	CD Section Printed Wiring Boards .....	14
3-4.	CD Section Schematic Diagram .....	17
3-5.	Cassette Deck Section Schematic Diagram ....	22
3-6.	Cassette Deck Section Printed Wiring Boards ..	27
<b>4.</b>	<b>EXPLODED VIEWS</b> .....	31
<b>5.</b>	<b>ELECTRICAL PARTS LIST</b> .....	37

MODEL IDENTIFICATION

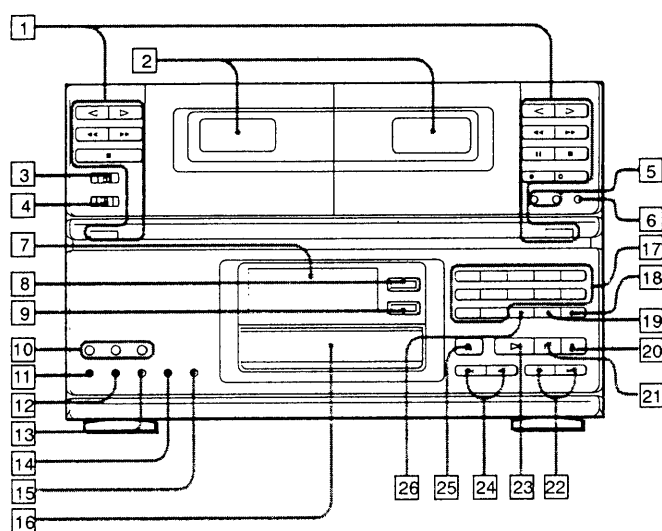
Back Panel



- 4-955-819-01: HTC-D209 AEP, UK, Italian, Germany Mdels.
- 4-955-819-11: HTC-D209 E, East European, Malaysia, Singapore Models.
- 4-955-819-21: HTC-D209 Saudi Arabia, Australian Models.
- 4-955-819-31: HTC-D309 AEP, UK, Italian, Germany Models.
- 4-955-819-41: HTC-D309 E, East European, Malaysia, Singapore, CIS Models.
- 4-955-819-51: HTC-D309 Saudi Arabia, Australian Models.

This section is extracted from instruction manual.

## SECTION 1 GENERAL



## Location of Controls

### Cassette Deck

- 1 Tape operation buttons
  - ◀◀ Leftward fast winding/AMS\*
  - ▶▶ Rightward fast winding/AMS\*
  - ▶ Forward play
  - ◀ Reverse play
  - Stop
  - ▲ EJECT
  - ⏸ PAUSE (deck B only)
  - REC MUTE (record muting) (deck B only)
  - REC (record) (deck B only)
- 2 Cassette holders
- 3 DOLBY NR (noise reduction) switch (32, 80)
- 4 DIRECTION MODE selector (28, 32, 38, 80)
- 5 DUBBING SPEED (HIGH/NORMAL) button (38, 40)
- 6 CD SYNCHRO button (80, 84)

### Compact Disc Player

- 7 Display window
- 8 EDIT/TIME FADE button (86, 88, 94)
- 9 TIME SET button (86, 94)
- 10 PLAY MODE buttons
  - PROGRAM button (54)
  - SHUFFLE button (50, 52)
  - CONTINUE button (52)
- 11 MUSIC SCAN button (58)
- 12 A.SPACE/A.CUE (auto space/auto cue) button (48, 96)
- 13 TIME button (44)
- 14 REPEAT button (60)
- 15 FADER button (92)
- 16 Disc tray
- 17 Numeric buttons (46, 52)
- 18 CLEAR (program clear) button (56)
- 19 CHECK (program check) button (56)
- 20 ■ (stop) button (42)
- 21 ⏸ (pause) button (42)
- 22 ◀◀/▶▶ (manual search) buttons (46)
- 23 ▶ (play) button (42)
- 24 ◀◀/▶▶ (AMS\*) buttons (46)
- 25 OPEN/CLOSE ▲ button (42)
- 26 > 12 (over 12) button (46)

\* AMS is the abbreviation of Automatic Music Sensor.



## SECTION 2 ADJUSTMENTS

### 2-1. MECHANICAL ADJUSTMENTS

#### Precautions:

- Clean the following parts with a denatured-alcoholmoistened swab;
 

record/playback/erase head	
pinch roller	rubber belts
capstan	idler
- Demagnetize the record/playback head with a head demagnetizer.  
(Head demagnetizer do not approach for the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed in the rated power supply voltage unless otherwise noted.

#### Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	35 to 60g · cm (0.49 to 0.83 oz · inch)
FWD Back tension	CQ-102C	2 to 6g · cm (0.03 to 0.08 oz · inch)
REV	CQ-102RC	35 to 60g · cm (0.49 to 0.83 oz · inch)
REV Back tension	CQ-102RC	2 to 6g · cm (0.03 to 0.08 oz · inch)
FF, REW	CQ-201B	70 to 110g · cm (0.98 to 1.52 oz · inch)

### 2-2. ELECTRICAL ADJUSTMENTS

0 dB=0.775 V (AF)

#### Precautions:

#### CASSETTE DECK SECTION

- Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.
- The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
- The adjustments should be performed for both L-CH and R-CH.
- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch : OFF  
TAPE : TYPE I

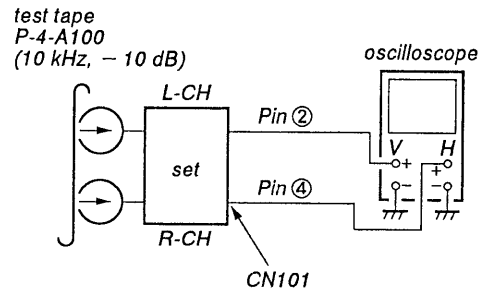
Type	Signal	Used for
P-4 A100	6.3kHz, -10dB	Azimuth Adjustment
P-4 L300	315Hz, 0dB	PB Level Adjustment
WS 48B	3kHz, 0dB	Tape Speed Adjustment

#### Record/Playback Head Azimuth Adjustment

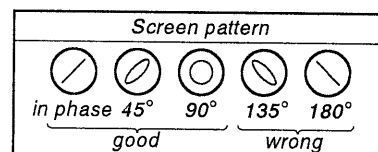
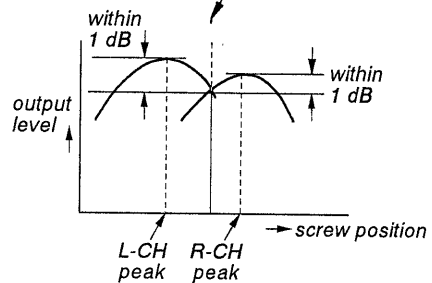
**Note :** Perform this adjustments for both decks.

#### Procedure :

- Mode : FWD playback

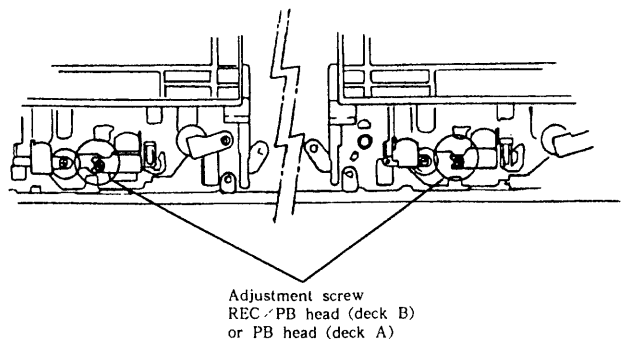


- Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



- After the adjustments, apply suitable locking compound to the parts adjusted.

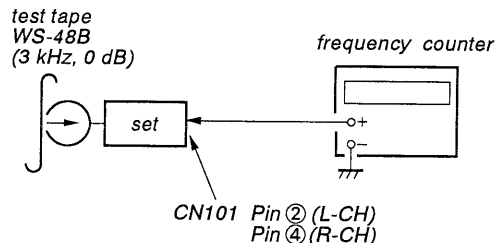
#### Adjustment Location :



## Tape Speed Adjustment. DECK A DECK B

### Procedure :

Mode : playback



#### • High speed adjustment (Must be first Adjustment B deck)

1. Push HIGH speed button.
2. Adjust RV71 so that the frequency counter reads  $6,000 \pm 30\text{Hz}$ .

#### • NORMAL speed adjustment

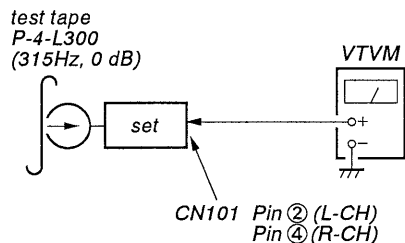
1. Push NORMAL speed button.
2. Adjust RV72 so that the frequency counter reads  $3,000 \pm 15\text{Hz}$ .

(See right for Adjusting Parts Location)

Frequency difference between deck A and deck B the beginning of the tape should be within 1%.

## Playback Level Adjustment DECK A DECK B

### Procedure :



Mode : FWD playback

DECK-A side RV11 (L-CH), RV21 (R-CH)

DECK-B side RV11 (L-CH), RV21 (R-CH)

so that the limits below are satisfied.

### Adjustable limits :

CN101 level :  $-7.7 \pm 0.5\text{ dB}$  (0.301 - 0.338)

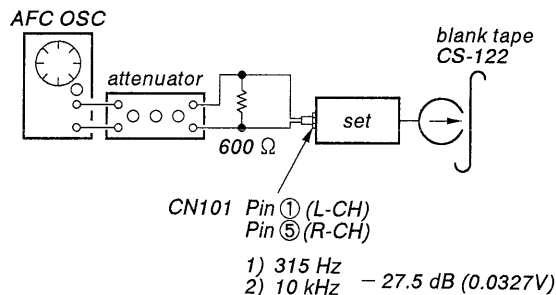
level difference between the channels : within 1.0dB

(See right for Adjusting Parts Location)

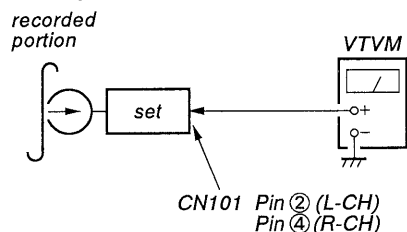
## Record BIAS Current Adjustment DECK B

### Procedure :

1. Mode : record



2. Mode : Playback



Playback the signal recorder in step 1.

Confirm that the 10kHz playback output is  $0 \pm 0.5\text{dB}$  relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

(See right for Adjusting Parts Location)

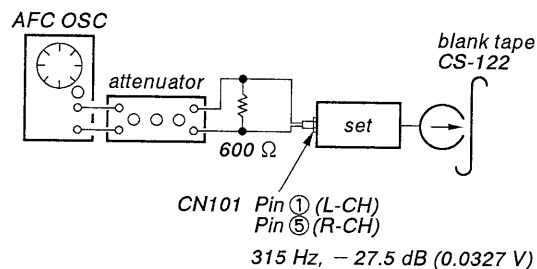
## Record Level Adjustment DECK B

### Setting :

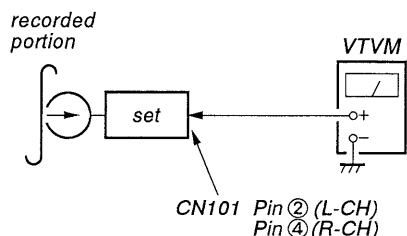
TAPE : TYPE I

### Procedure :

1. Mode : record



2. Mode : playback



3. Playback the signal recorded in step 1.

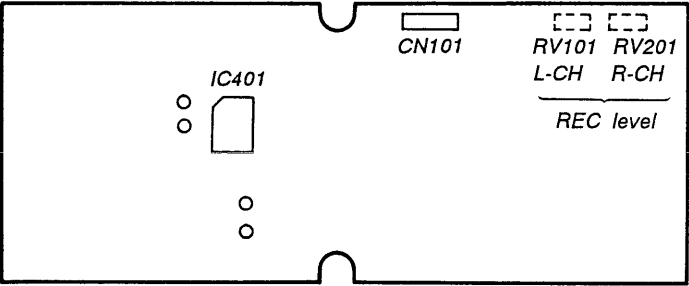
Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1-3.

Adjustable limits :  $-27.5 \pm 0.5\text{ dB}$  (0.0309 - 0.0346)

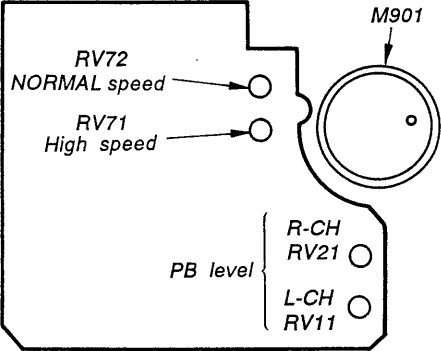
(See right for Adjusting Parts Location)

• Adjusting Parts Location

TC MAIN BOARD (Conductor Side)



AUDIO BOARD (Conductor Side)

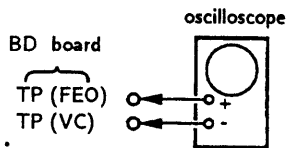


## CD SECTION

### Note :

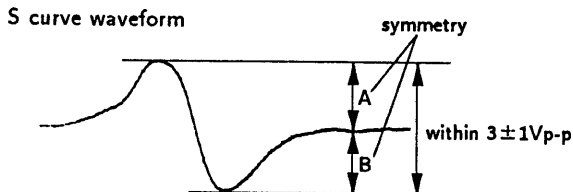
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than  $10M\Omega$  impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

### S Curve Check



#### Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within  $3 \pm 1V_{p-p}$ .

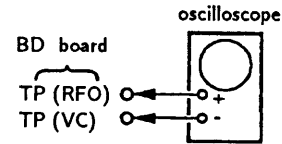


5. After check, remove the lead wire connected in step 2.

**Note :** • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

### RF Level Check

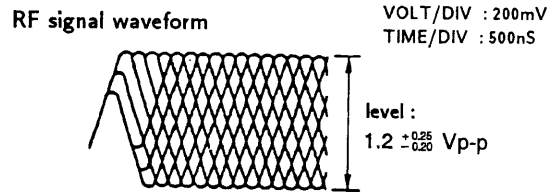


#### Procedure :

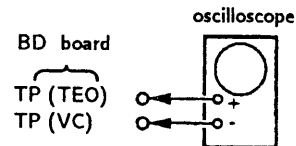
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

### Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.



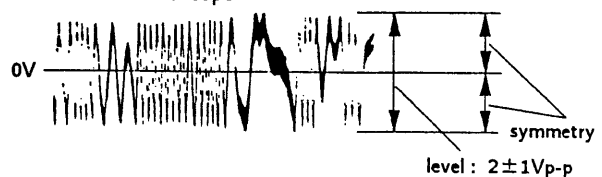
### E-F Balance Check



#### Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

#### Traverse oscilloscope

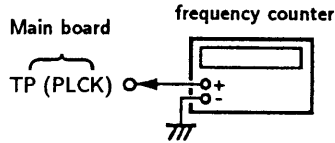


6. Remove the lead wire connected in step 1.

## RF PLL Free-run Frequency Check

### Procedure :

1. Connect frequency counter to test point (PLCK) with lead wire.



2. Turn Power switch on.
3. Confirm that reading on frequency counter is
4. 3218MHz.

### Focus/Tracking Gain

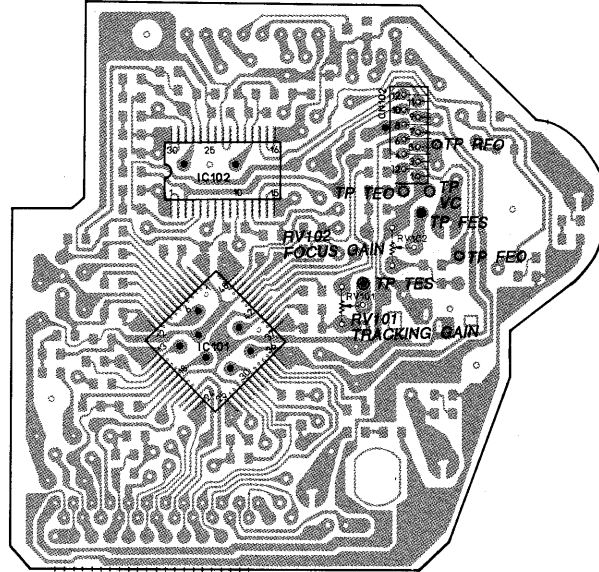
This gain has a margin, so even if it is slightly off. There is no problem.

Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

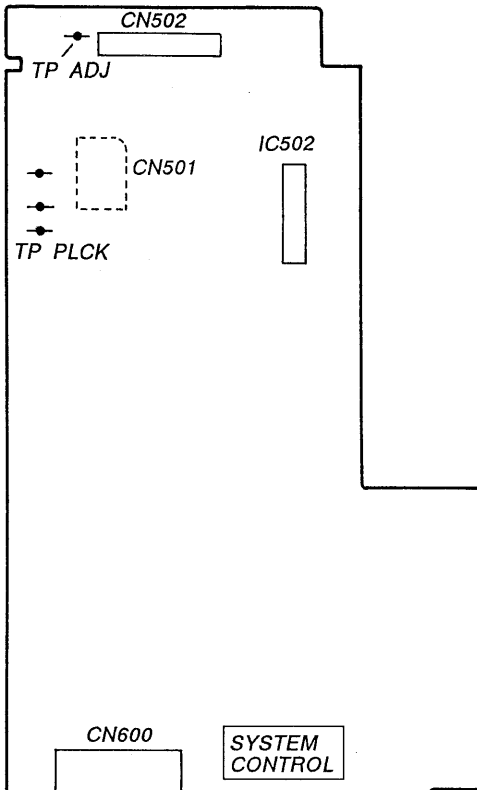
### Adjustment Locations : [BD board]

— conductor side —



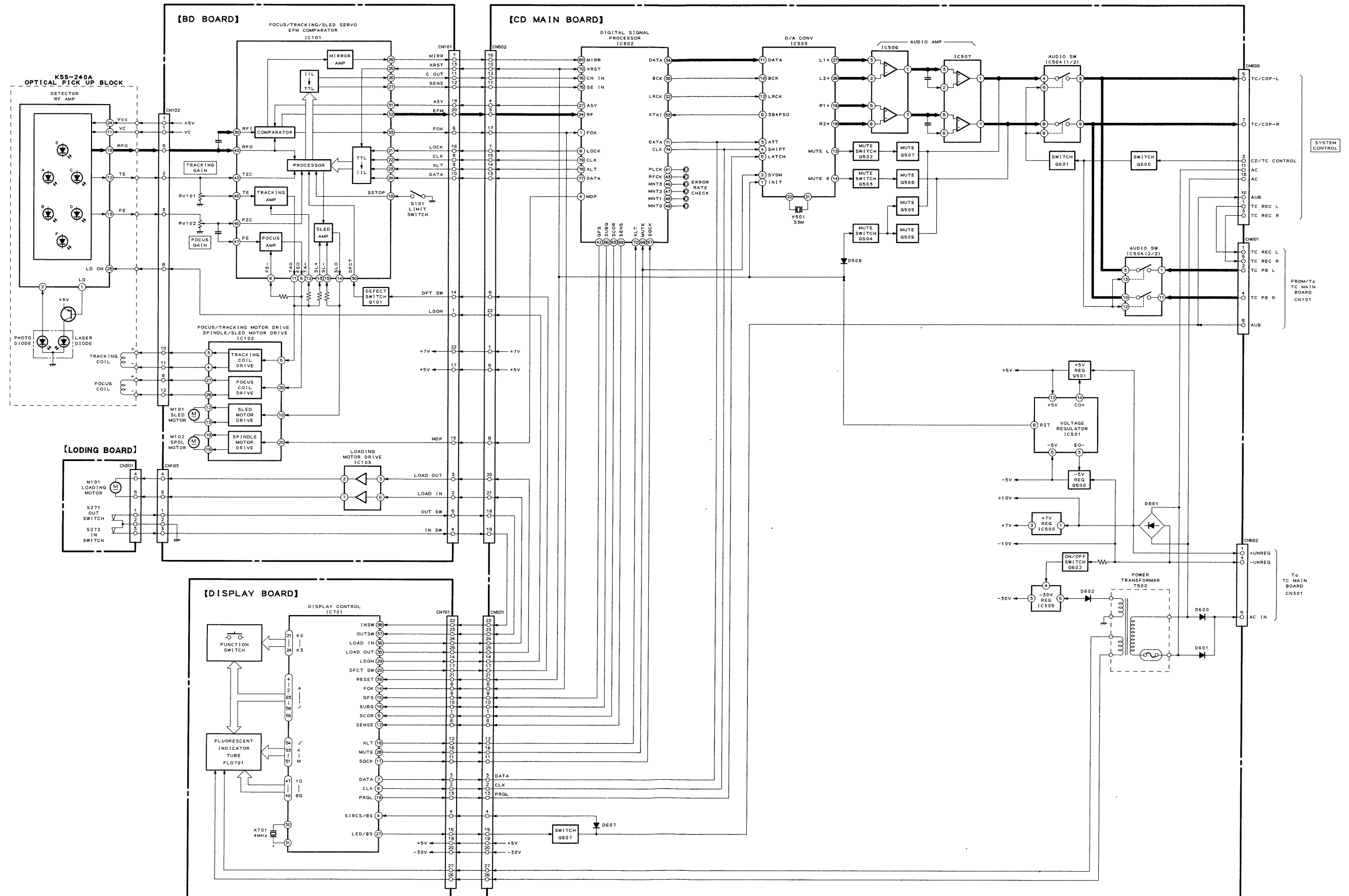
### Adjustment Location ;

CD MAIN BOARD (Component Side)

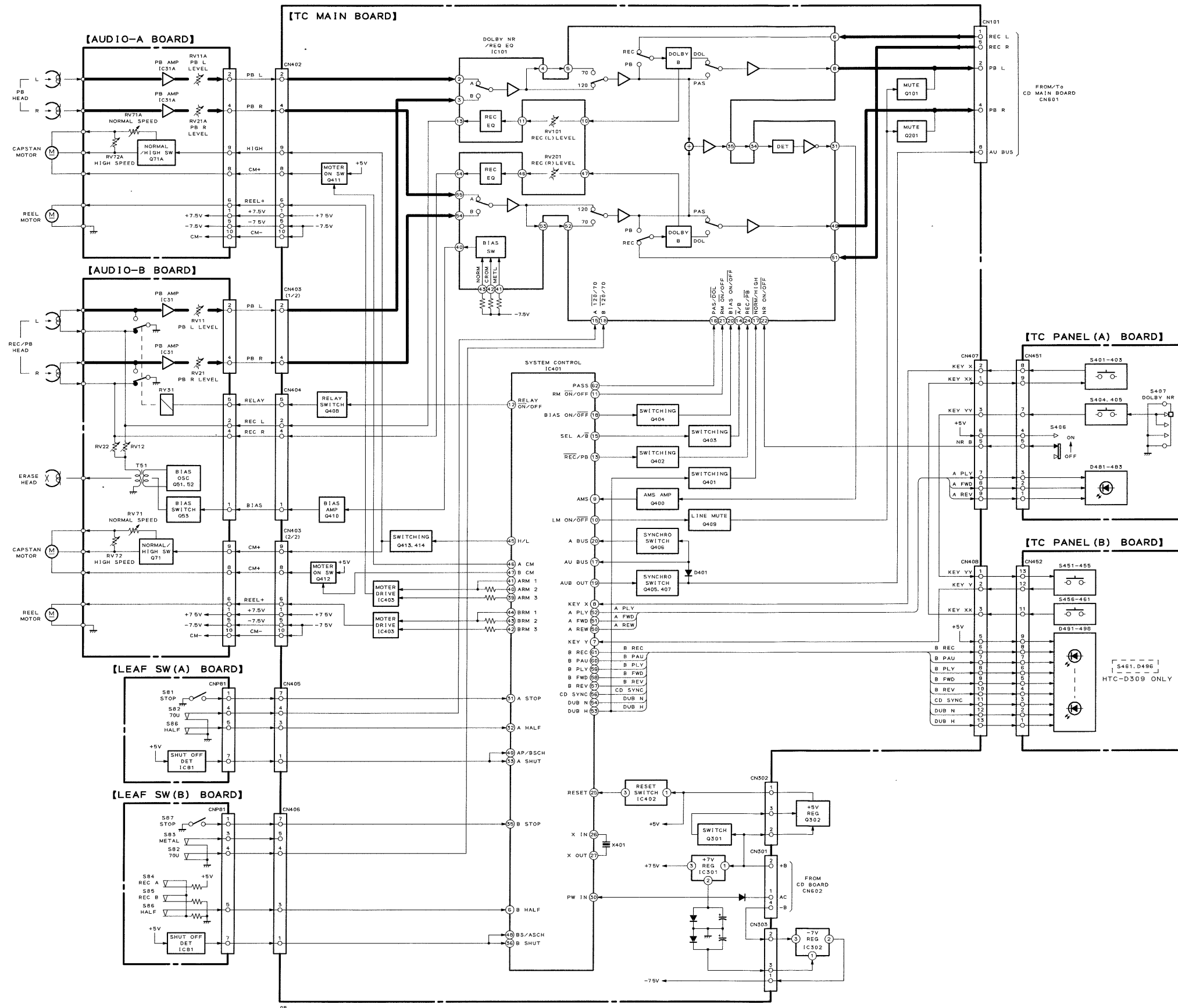


## SECTION 3 DIAGRAMS

### 3-1. CD SECTION BLOCK DIAGRAM

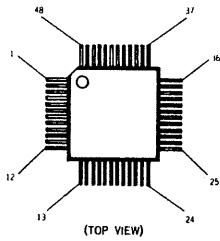


### 3-2. CASSETTE DECK SECTION BLOCK DIAGRAM

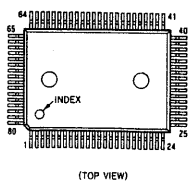


## • Semiconductor Lead Layouts

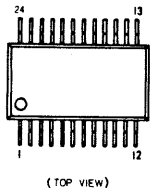
CXA1372AQ



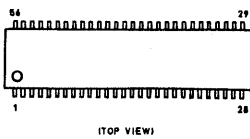
CXD2500BQ



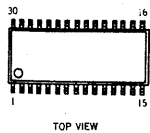
CXD2565M



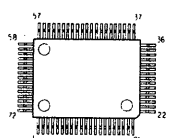
HA12171NT



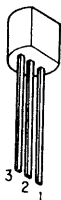
LA6532M



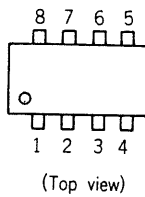
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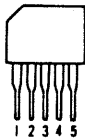
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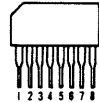
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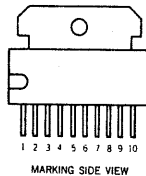
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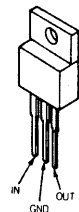
M54641L



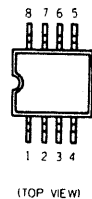
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TA7807S



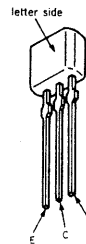
PC4570G2



DTA144ES  
DTC144ES



2SA1175-HFE  
2SC2785-HFE  
2SC3623A-LK



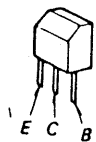
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2SD1616A-K



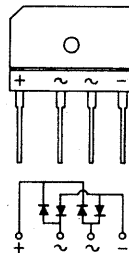
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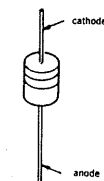
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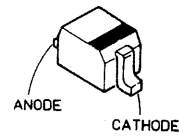
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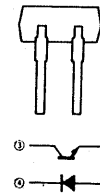
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UZL-6L3  
UZL-7L2  
UZL-9H1  
11ES2  
11EQS04



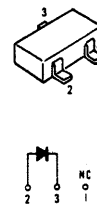
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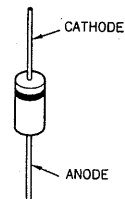
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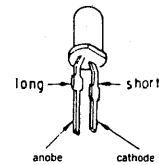
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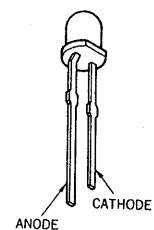
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SEL2210S-CD  
SEL2410E-TH10

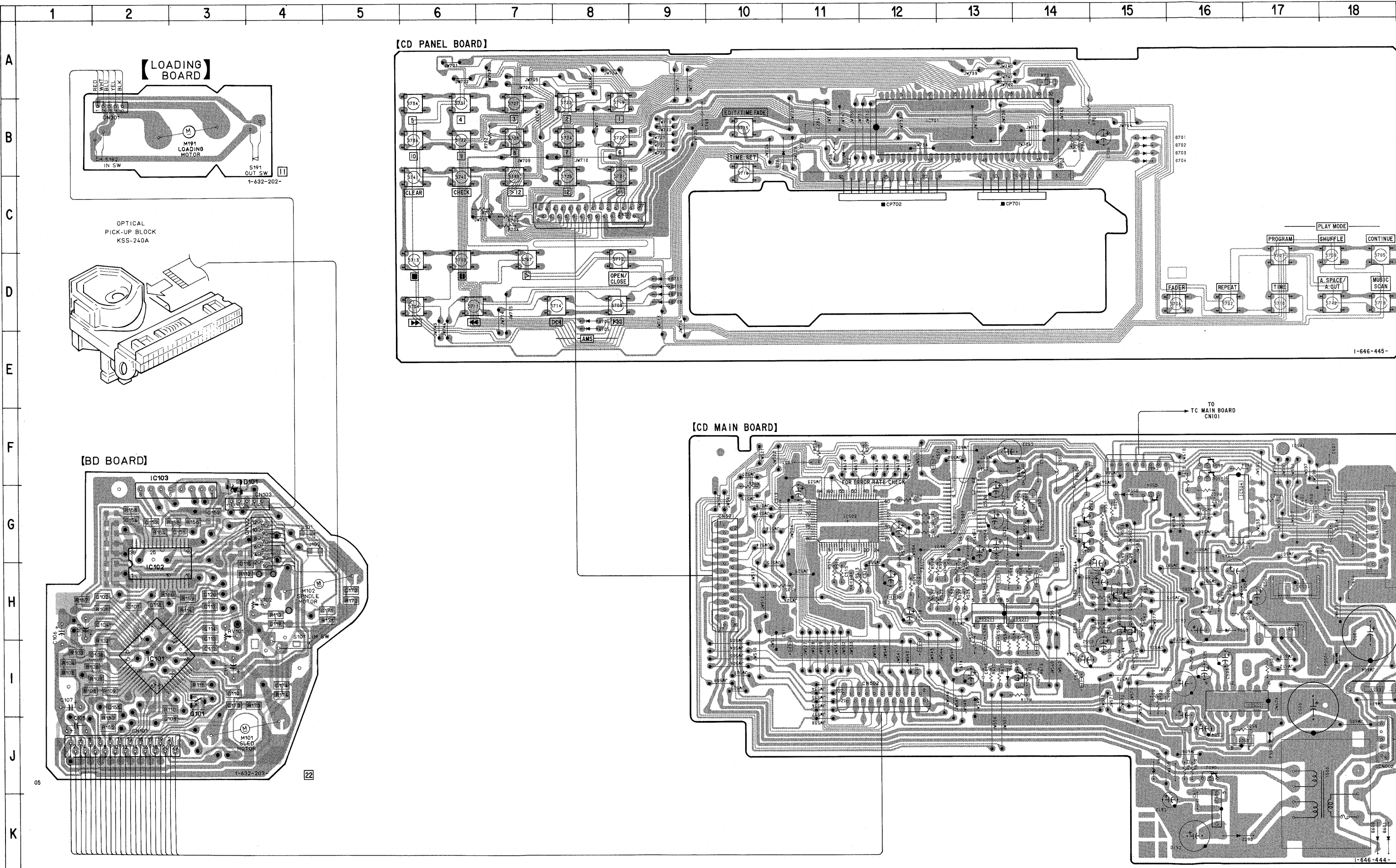


SEL2810A





3-3. CD SECTION PRINTED WIRING BOARDS



Note on Printed Wiring Board:  
• : parts extracted from the component side.  
• : Pattern from the side which enables seeing.  
• : Pattern of the rear side.

3-4. CD SECTION SCHEMATIC DIAGRAM

Semiconductor Location

Ref. No.	Location
D101	G-3
D504	H-16
D505	H-16
D506	H-16
D507	F-14
D508	G-15
D600	K-18
D601	K-18
D602	K-16
D603	J-15
D607	I-15
D608	H-16
D701	B-15
D702	B-15
D703	B-15
D704	B-15
D705	E-8
D706	D-8
D707	B-11
D708	D-9
D709	D-9
D710	D-9
D711	D-9
D712	B-11
D801	I-18
IC101	I-2
IC102	H-2
IC103	G-2
IC500	H-17
IC501	I-16
IC502	G-11
IC503	G-13
IC504	G-16
IC505	K-16
IC506	H-13
IC507	H-14
IC701	B-13
Q101	I-3
Q500	H-16
Q501	H-17
Q502	G-14
Q503	G-14
Q504	G-15
Q505	H-15
Q506	H-15
Q507	H-15
Q600	F-16
Q601	F-16
Q602	J-16
Q605	H-14

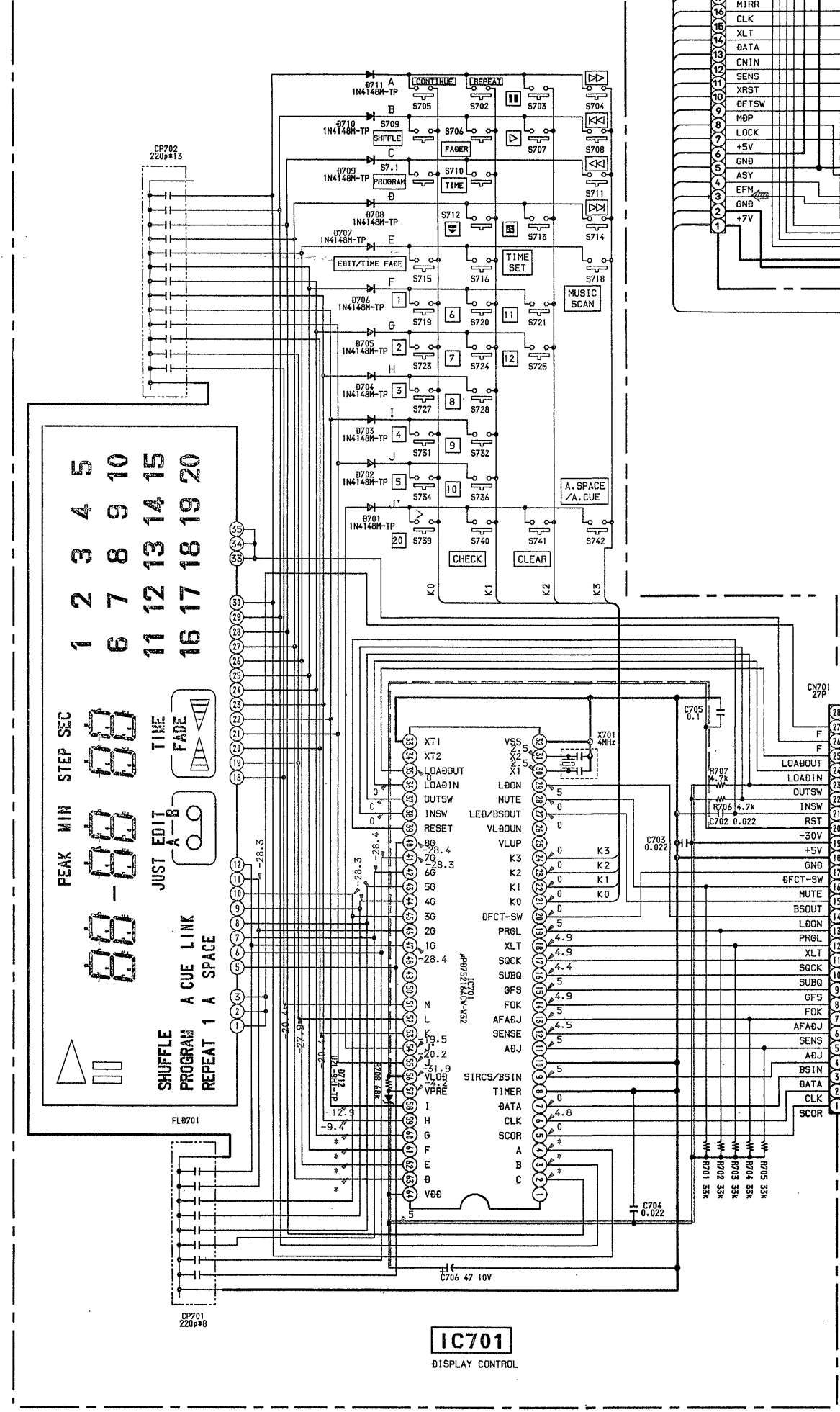
Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}$  W or less unless otherwise specified.

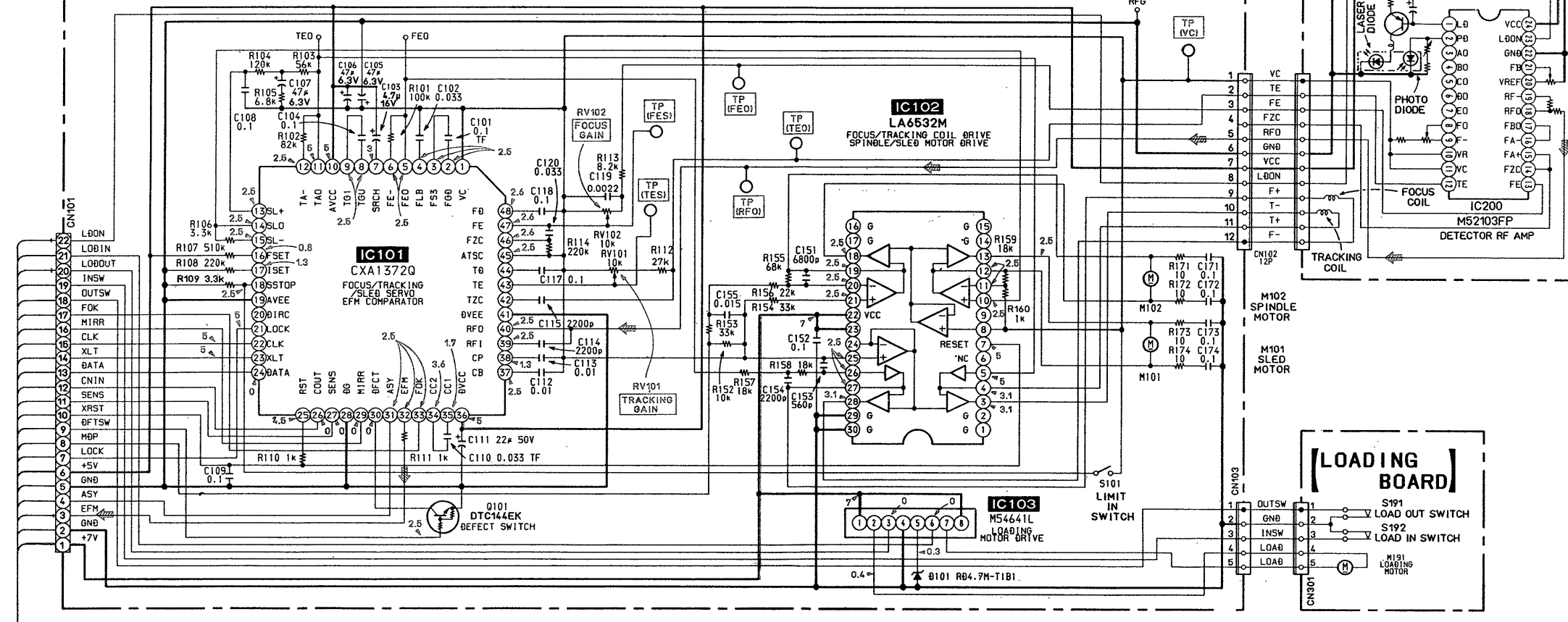
Note: The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

- $\text{---}$ : B + Line.
- $\text{---}$ : B - Line.
- $\text{---}$ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions, no mark :CD PLAY (COMMON)
- ( ) :DECK A PB
- $\ll$  :DECK A PB
- $\gg$  :DECK B PB
- Voltages are taken with a VOM (10 M $\Omega$ /V). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\Rightarrow$ : CD
- $\Rightarrow$ : PB (DECK B)
- $\Rightarrow$ : REC (DECK B)

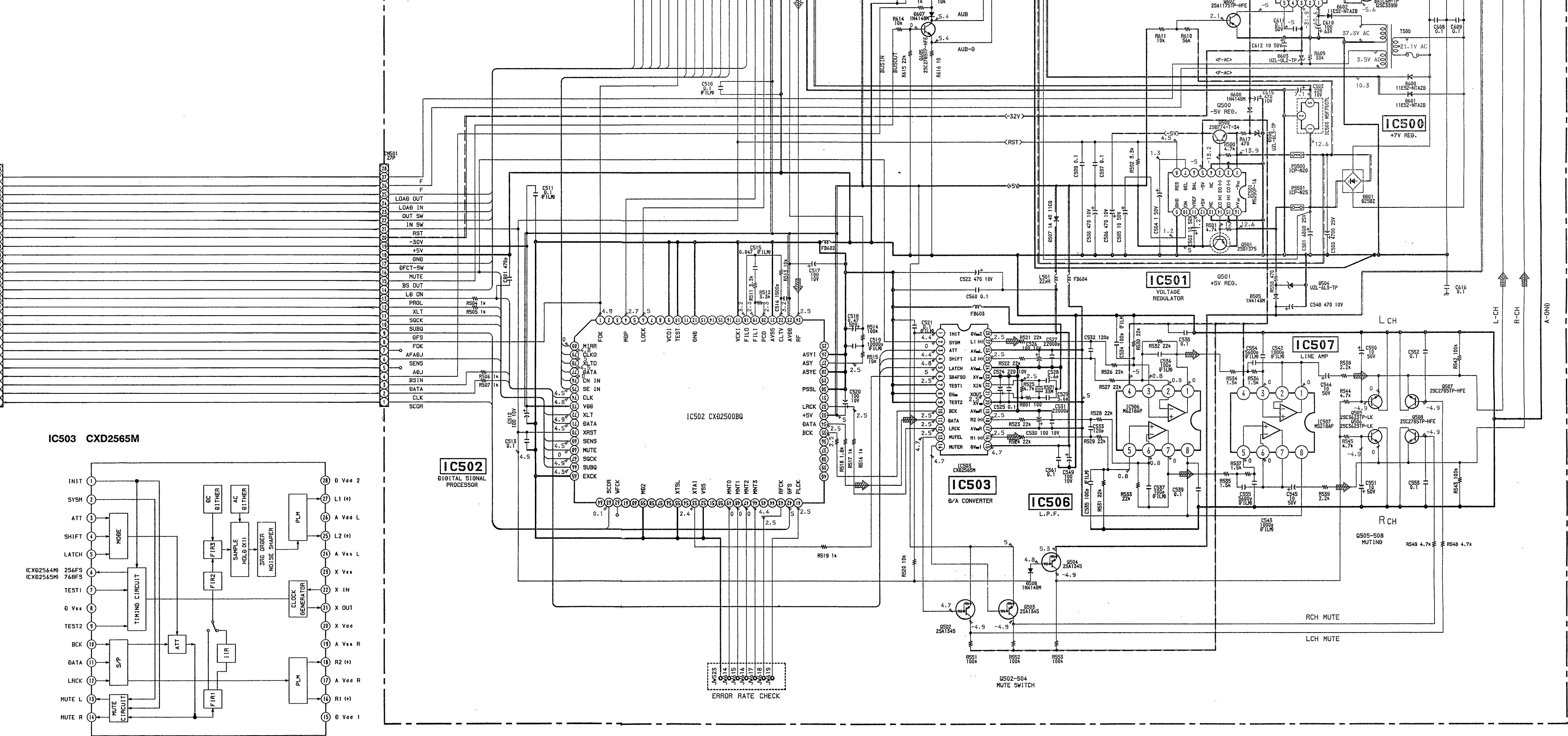
CD PANEL BOARD



BD BOARD

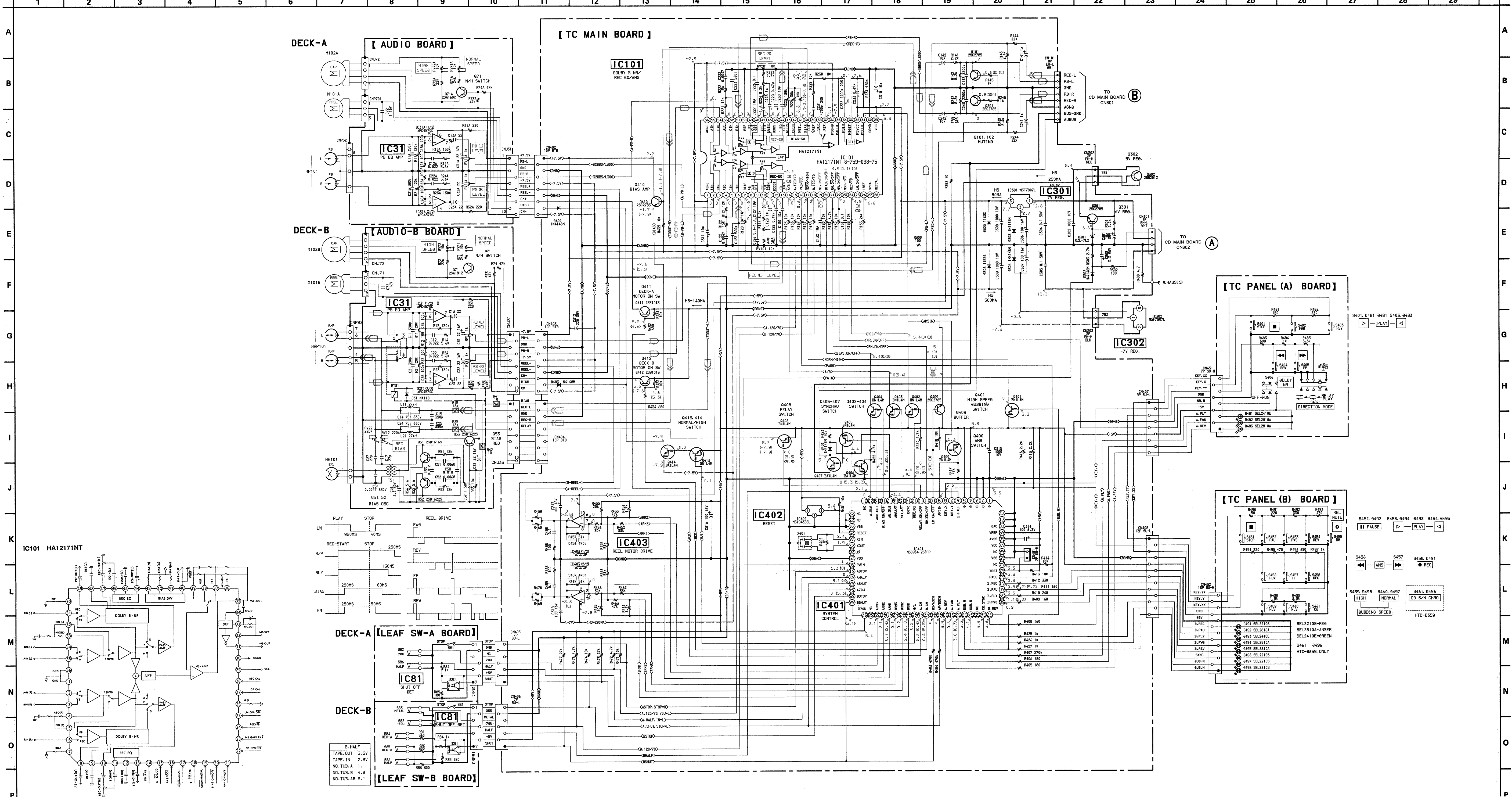


CD MAIN BOARD





3-5. CASSETTE DECK SECTION SCHEMATIC DIAGRAM



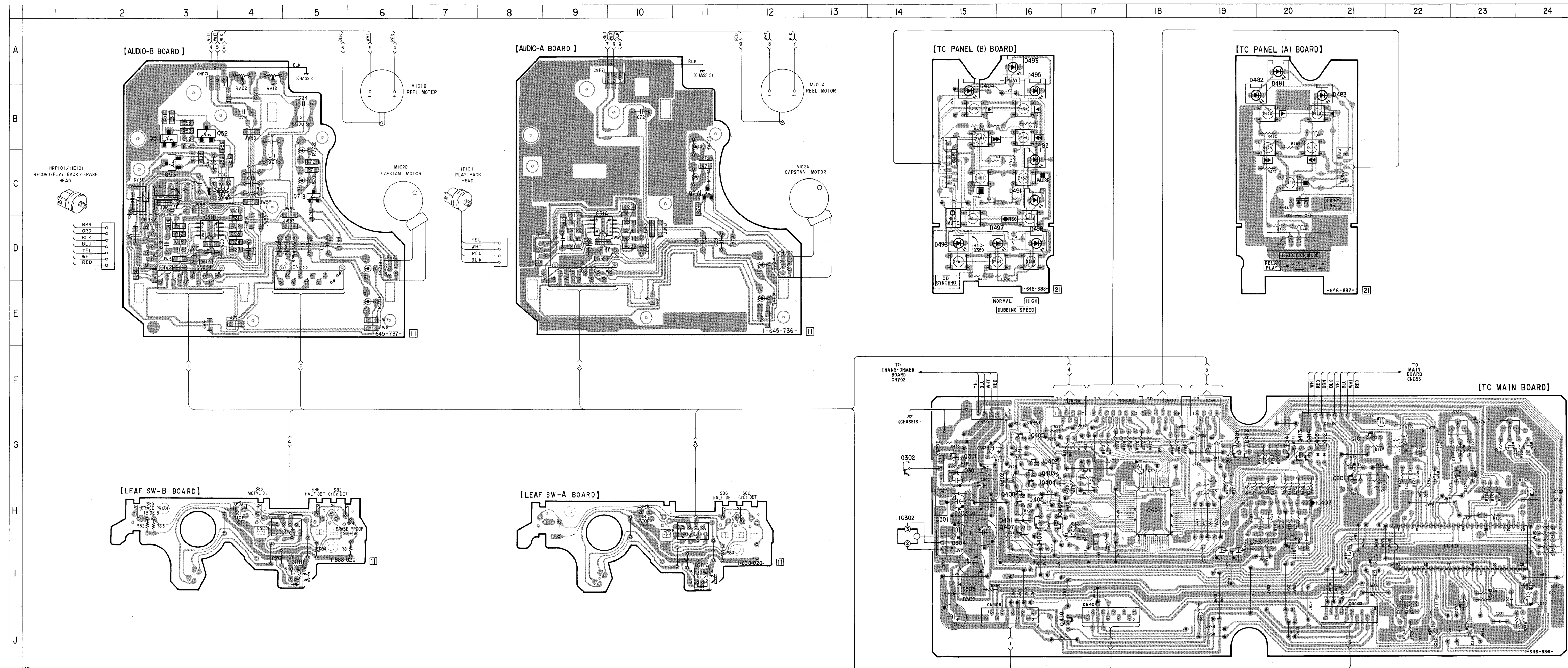
**Note on Schematic Diagram:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\mu\text{F}$ :  $\mu\text{F}$
- 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}$  W or less unless otherwise specified.

**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

- $\Delta$  : B + Line.
- $\Delta$  : B - Line.
- $\Delta$  : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark : REC (COMMON)
- $\Delta$  : DECK A PB
- $\Delta$  : DECK B PB
- Voltages are taken with a VOM (10 MQ/V).
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\Delta$  : CD
- $\Delta$  : PB (DECK B)
- $\Delta$  : REC (DECK B)

- See page 13 for Semiconductor Lead Layouts.



- Semiconductor Location

Ref. No.	Location
D31	C-2
D301	G-15
D302	H-16
D303	H-15
D304	H-15
D305	I-15
D306	I-15
D401	H-16
D402	G-21
D403	G-20
D481	A-20
D482	B-19
D483	B-21
D484	C-16
D492	C-16
D493	A-16
D494	B-15
D495	B-16
D496	D-15
D497	D-16
D498	D-16
IC31A	D-9
IC31B	D-3
IC101	I-22
IC301	H-15
IC302	H-14
IC401	H-18
IC402	H-17
IC403	H-20
Q51	B-3
Q52	B-3
Q53	C-3
Q71A	C-11
Q71B	C-5
Q101	G-21
Q201	H-21
Q301	G-15
Q302	G-14
Q400	G-16
Q401	G-19
Q402	G-16
Q403	G-16
Q404	H-16
Q405	H-16
Q406	H-16
Q407	H-16
Q408	H-16
Q409	H-16
Q410	J-17
Q411	G-20
Q412	G-19
Q413	G-20
Q414	G-20

**Note on Printed Wiring Board:**

- — : parts extracted from the component side.

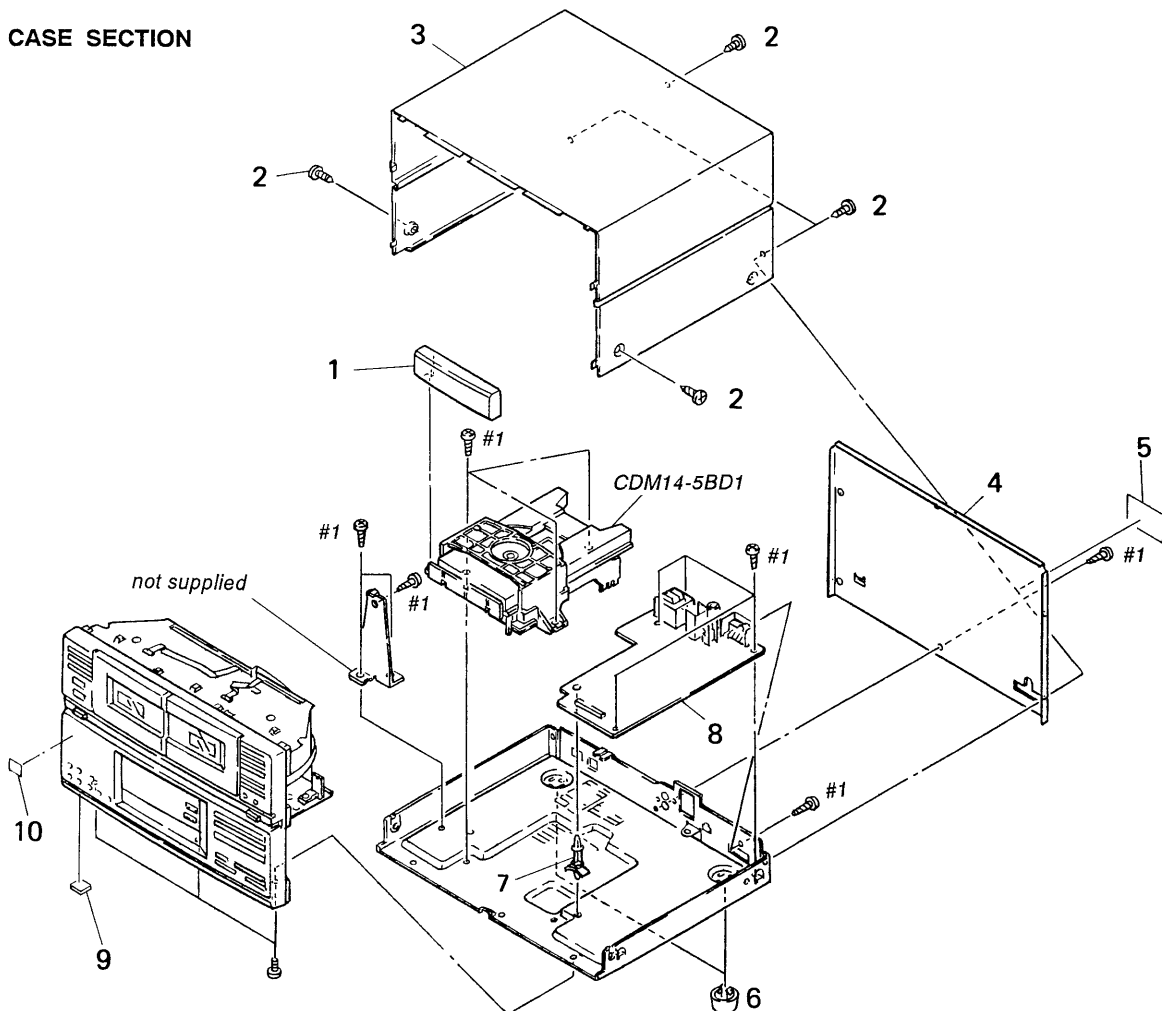


## EXPLODED VIEWS

NOTE:

- Hardware (# mark) list is given in the last of this parts list.

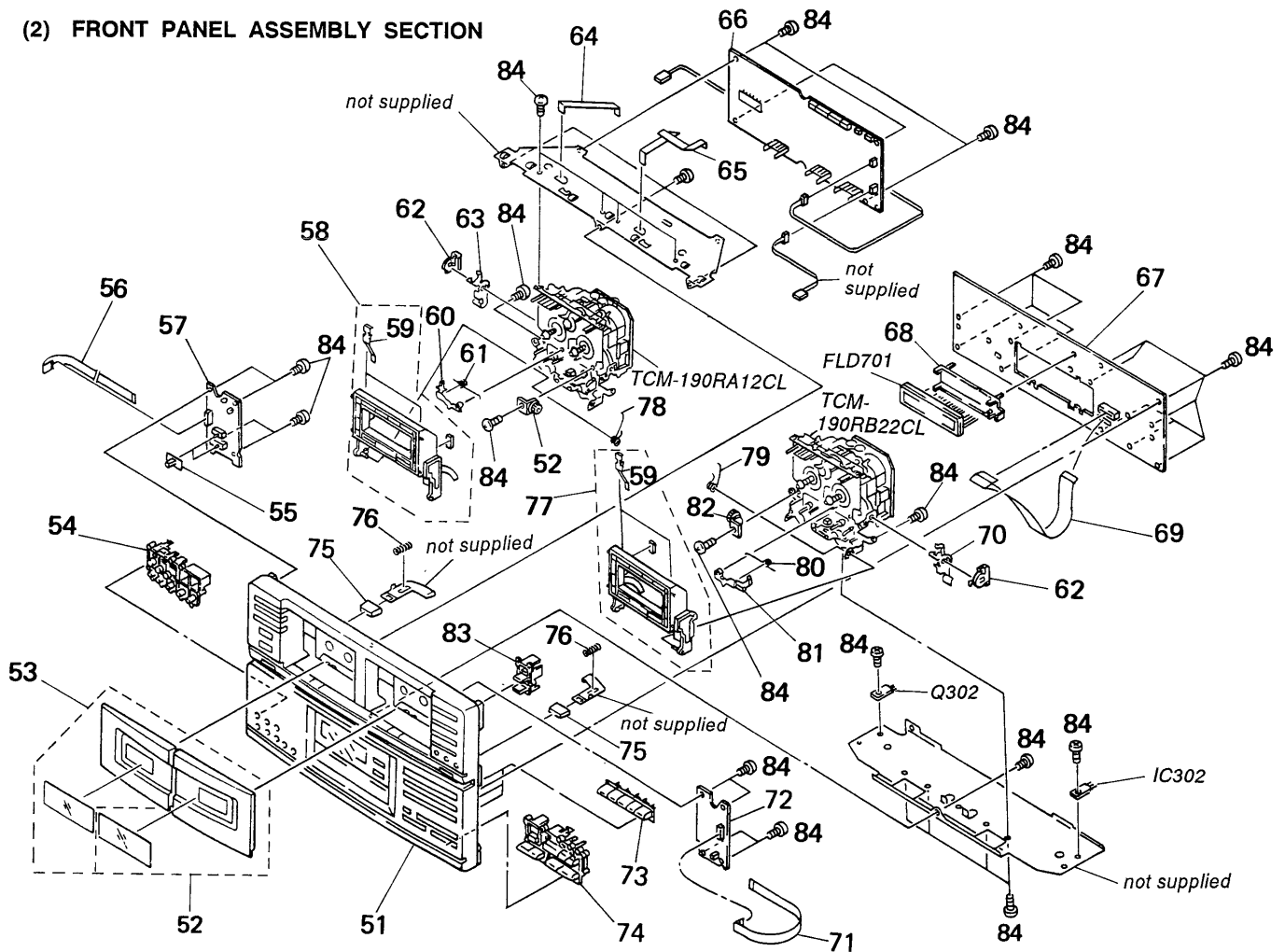
## (1) CASE SECTION



Ref. No.	Part No.	Description	Remark
1	4-955-815-01	PANEL, LOADING	
2	3-363-099-01	SCREW (CASE 3 TP2) (D209:AUS/D309:UK, AUS)	
2	3-704-366-01	SCREW (CASE) (M3X8) (D209:AEP, UK, E, G, IT, EE, EA, MY, SP/D309:AEP, E, IT, G, EA, EE, MY, SP, CIS)	
* 3	4-955-759-31	CASE	
* 4	4-955-819-01	PANEL, BACK (D209:AEP, UK, G, IT)	
* 4	4-955-819-11	PANEL, BACK (D209:E, EE, MY, SP)	
* 4	4-955-819-21	PANEL, BACK (D209:EA, AUS)	
* 4	4-955-819-31	PANEL, BACK (D309:AEP, UK, G, IT)	
* 4	4-955-819-41	PANEL, BACK (D309:E, EE, MY, SP, CIS)	
* 4	4-955-819-51	PANEL, BACK (D309:EA, AUS)	

Ref. No.	Part No.	Description	Remark
* 5	4-941-548-01	LABEL, CLASS 1	
6	X-4941-228-1	FOOT ASSY	
7	4-943-687-01	HOLDER, PC BOARD	
* 8	A-4356-652-A	CD MAIN BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)	
* 8	A-4356-661-A	CD MAIN BOARD, COMPLETE (D209:UK, G/D309:UK, G)	
9	4-948-236-01	CUSHION (107)	
* 10	3-703-713-41	STICKER, SONY SYMBOL (10) (D209:AUS/D309:UK, AUS)	

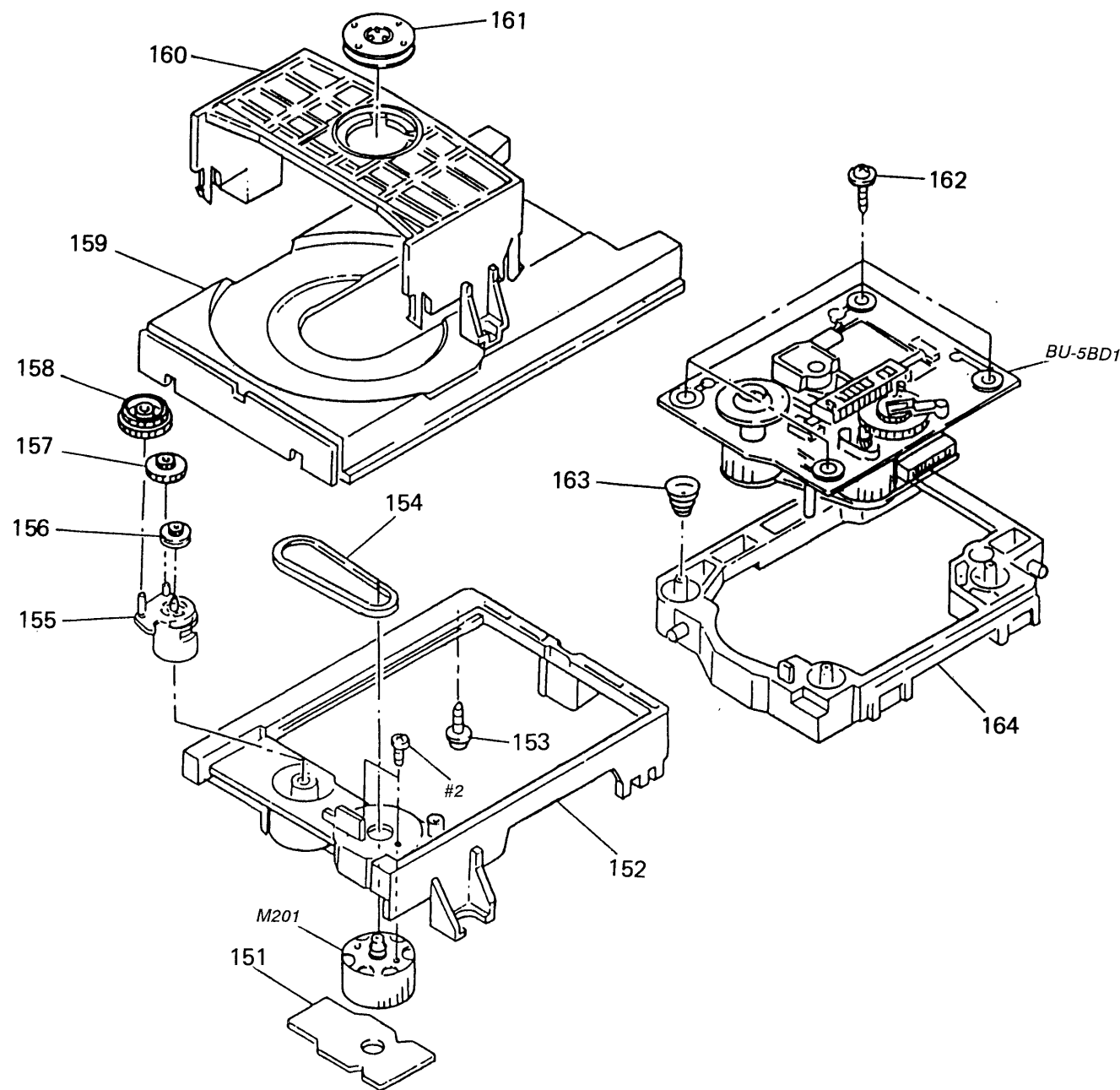
## (2) FRONT PANEL ASSEMBLY SECTION



Ref. No.	Part No.	Description	Remark
51	X-4943-189-1	PANEL ASSY, FRONT (D209)	
51	X-4943-470-1	PANEL ASSY, FRONT (D309)	
52	X-4943-197-1	LID (B) ASSY, CASSETTE	
53	X-4943-196-1	LID (A) ASSY, CASSETTE	
54	4-955-812-01	BUTTON (CD-A)	
55	4-948-273-01	KNOB, SLIDE	
56	1-751-209-11	WIRE (FLAT TYPE) (9 CORE)	
* 57	1-646-887-11	TC PANEL (A) BOARD	
58	A-4325-163-A	HOLDER (L) ASSY, CASSETTE	
59	3-308-823-11	SPRING	
60	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
61	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
62	3-354-957-01	JOINT (LOCK LEVER)	
* 63	3-354-953-01	LEVER (LOCK LEVER L)	
64	1-590-574-11	WIRE, FLAT TYPE (7 CORE)	
65	1-590-485-11	WIRE, FLAT TYPE (7 CORE)	
* 66	A-4356-643-A	TC MAIN BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)	
* 66	A-4356-654-A	TC MAIN BOARD, COMPLETE (D209:UK, G/D309:UK, G)	
* 67	A-4356-653-A	CD PANEL BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)	
* 67	A-4356-662-A	CD PANEL BOARD, COMPLETE (D209:UK, G/D309:UK, G)	

Ref. No.	Part No.	Description	Remark
* 68	4-955-816-01	HOLDER (IF), FL TUBE	
69	1-690-729-11	WIRE, FLAT TYPE (27 CORE)	
* 70	3-354-954-01	LEVER (LOCK LEVER R)	
71	1-690-589-31	WIRE, FLAT TYPE (13 CORE) (D309:AUS)	
71	1-751-210-11	WIRE (FLAT TYPE) (13 CORE) (D209/D309: AEP, UK, E, G, IT, EE, EA, MY, SP, CIS)	
* 72	1-646-888-11	TC PANEL (B) BOARD	
73	4-955-741-01	BUTTON (PR)	
74	4-955-814-01	BUTTON (CD-C)	
75	4-935-355-41	BUTTON (EJECT)	
76	3-500-131-00	SPRING, COMPRESSION	
77	A-4325-164-A	HOLDER (R) ASSY, CASSETTE	
78	3-354-959-01	SPRING (LOADING L), TORSION	
79	3-354-960-01	SPRING (LOADING R), TORSION	
80	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
81	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
82	3-354-963-01	DAMPER	
83	4-955-813-01	BUTTON (CD-B)	
84	4-951-620-01	SCREW (2. 6X8), +BVTP	
FLD701	1-519-681-21	INDICATOR TUBE, FLUORESCENT	
IC302	8-759-604-95	IC M5F79M07	
Q302	8-729-209-15	TRANSISTOR 2SD2012	

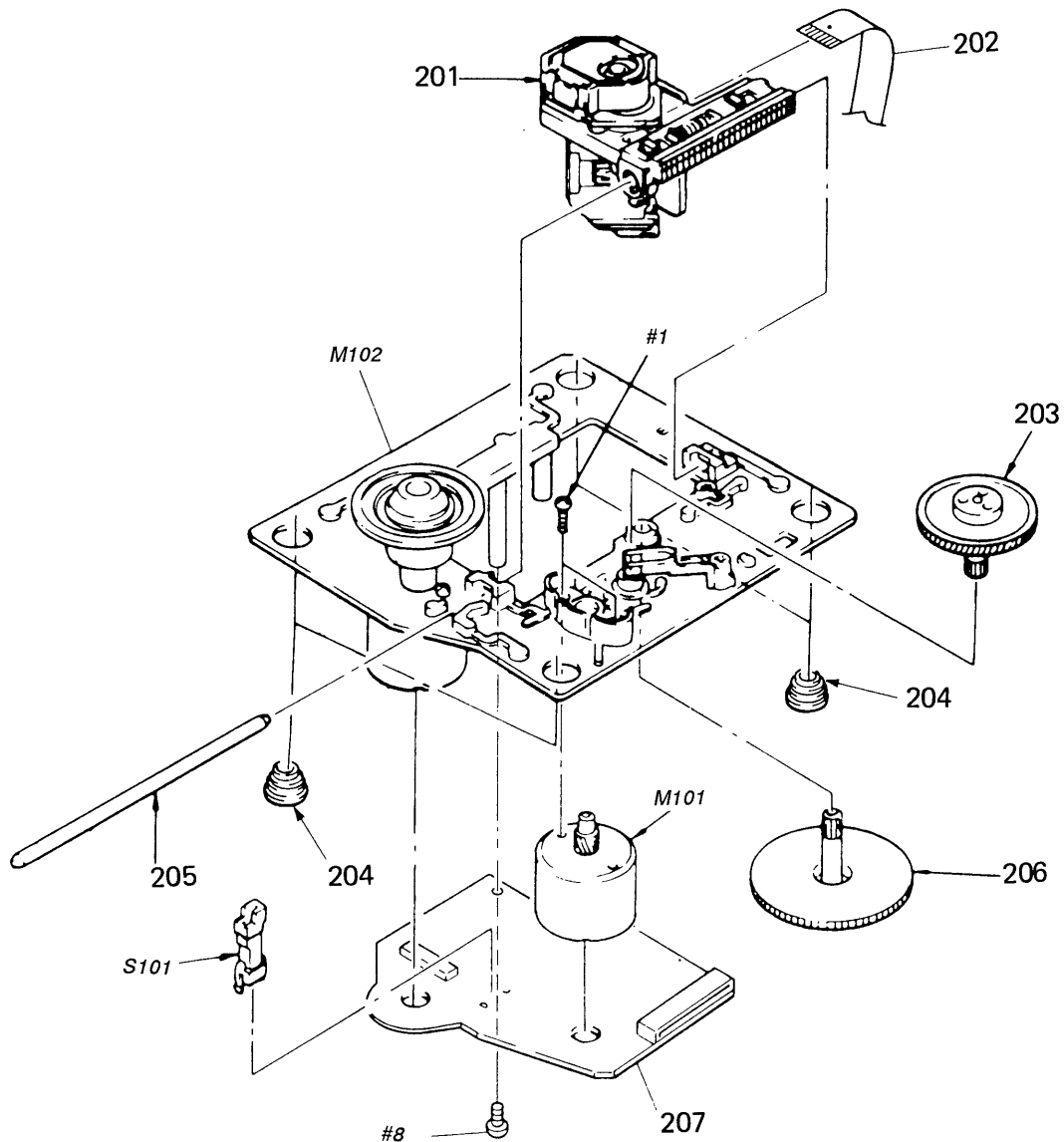
(3) CD MECHANISM SECTION (CDM14-5BD1)



Ref. No.	Part No.	Description	Remark
* 151	1-632-202-11	LOADING BOARD	
152	4-933-111-01	CHASSIS (MD)	
* 153	4-917-583-21	BRACKET, YOKE	
154	4-927-649-01	BELT	
155	4-933-109-01	CAM	
156	4-927-651-01	PULLEY (S)	
157	4-927-628-01	GEAR (C)	
158	4-933-107-01	GEAR (PL)	

Ref. No.	Part No.	Description	Remark
159	4-933-112-01	TABLE, DISK	
160	4-933-110-01	HOLDER (MG)	
* 161	1-452-538-11	MAGNET	
162	4-933-134-01	SCREW (+PTPWH M2. 6X6)	
163	4-917-541-01	SPRING (B)	
164	4-933-129-01	HOLDER (BU)	
M201	A-4604-363-A	MOTOR (L) ASSY	

(4) OPTICAL PICK-UP BLOCK ASSEMBLY (BU-5BD1)



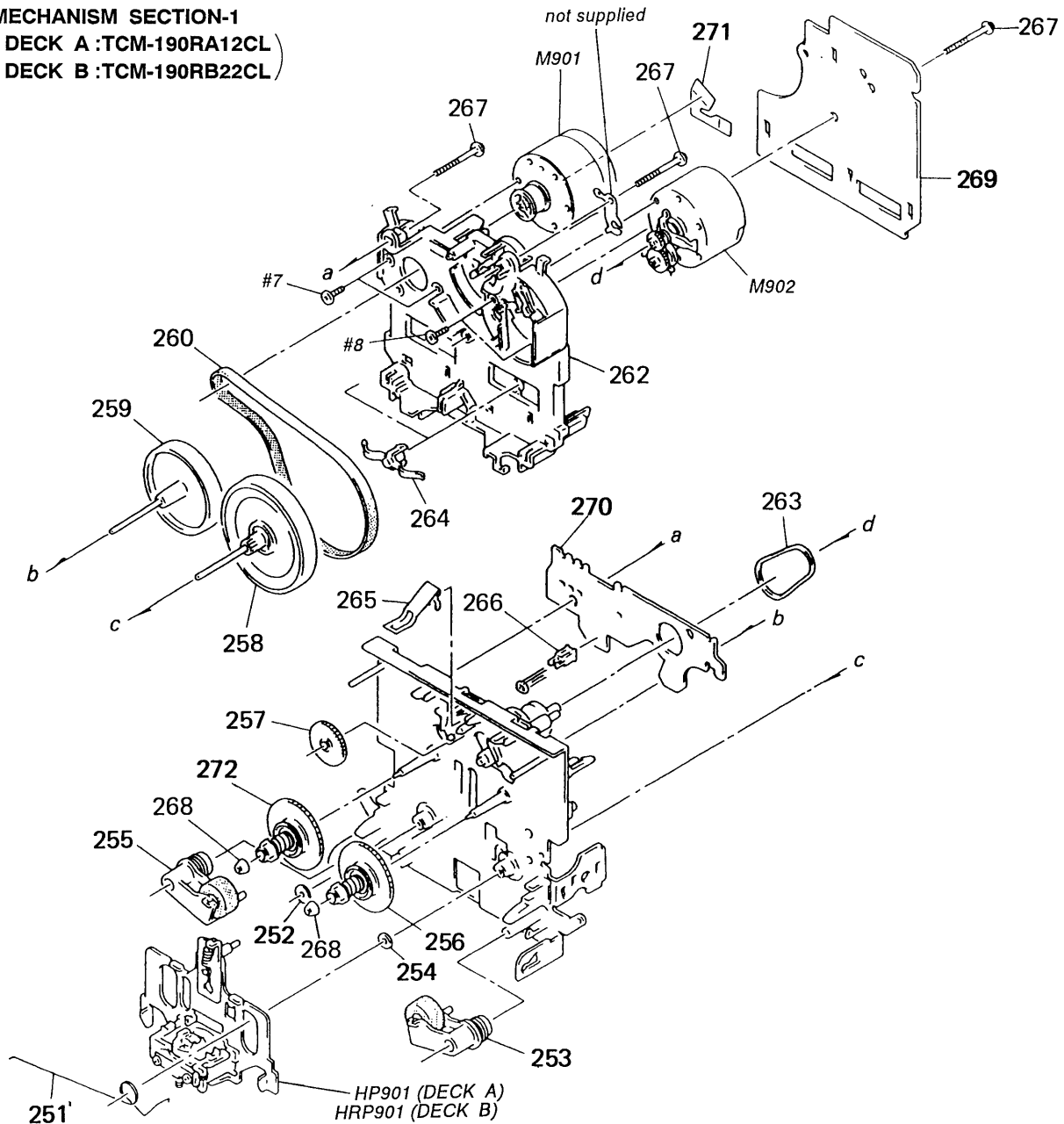
Ref. No.	Part No.	Description	Remark
△201	8-848-144-11	DEVICE, OPTICAL KSS-240A	
202	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
203	4-917-567-01	GEAR (M)	
204	4-933-126-01	INSULATOR (A)	
205	4-917-565-01	SHAFT, SLED	

Ref. No.	Part No.	Description	Remark
206	4-917-564-01	GEAR (P), FLATNESS	
* 207	A-4617-371-A	BD BOARD, COMPLETE	
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	

Note: The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.



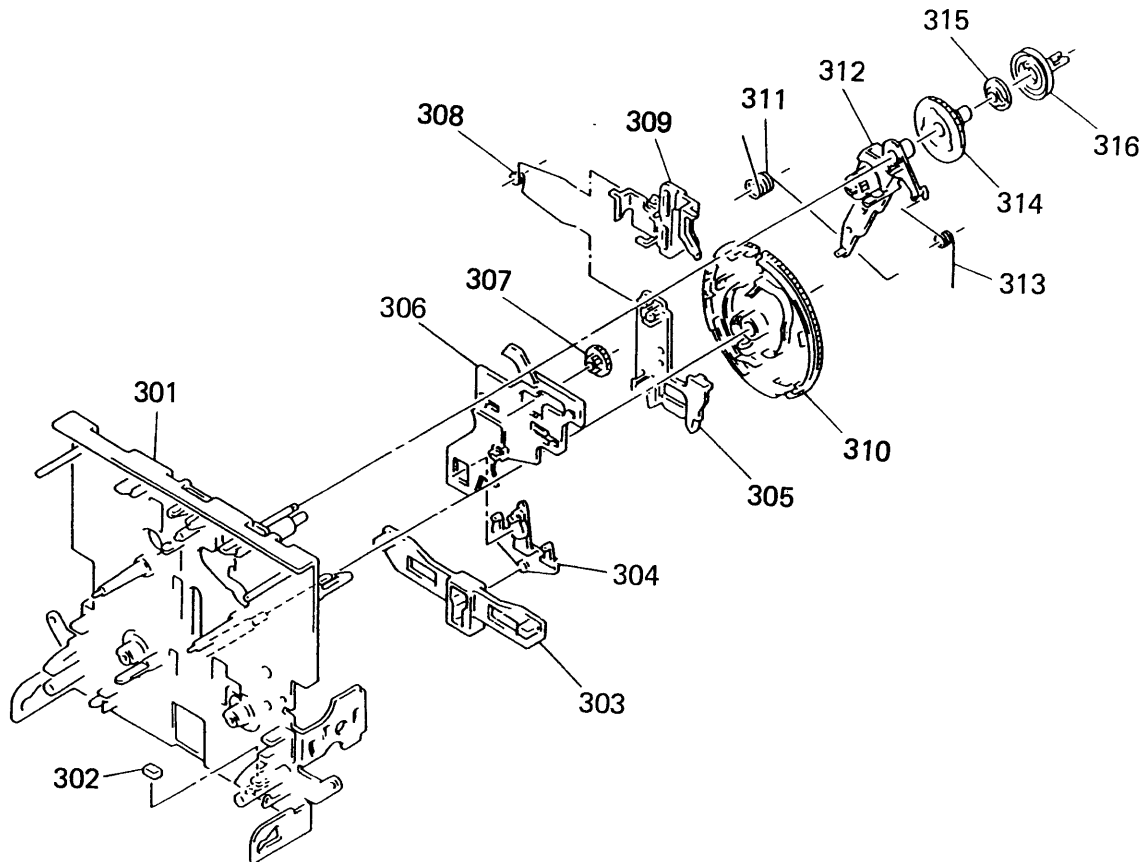
(5) MECHANISM SECTION-1  
(DECK A :TCM-190RA12CL)  
(DECK B :TCM-190RB22CL)



Ref. No.	Part No.	Description	Remark
251	3-359-455-01	SPRING, TORSION	
252	3-356-714-01	WASHER	
253	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	
254	3-356-713-01	WASHER	
255	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	
256	X-3359-404-1	TABLE ASSY, REEL	
257	3-359-424-01	GEAR (REV GEAR)	
258	X-3359-406-1	FLYWHEEL (FWD) ASSY	
259	X-3359-410-1	FLYWHEEL (REV) ASSY	
260	3-359-417-01	BELT (FLAT), CAPSTAN	
* 262	3-359-436-01	BASE (THRUST RETAINER), FITTING	
263	3-359-466-01	BELT (FR), SQUARE	
264	3-575-321-00	RETAINER, THRUST, CAPSTAN	

Ref. No.	Part No.	Description	Remark
265	3-359-430-01	SPRING (CASSETTE RETAINER), LEAF	
266	3-343-419-01	HOLDER (S SENSOR A)	
267	3-359-414-01	SCREW (+PTPWH 2X23)	
268	3-362-308-01	CAP (REEL)	
* 269	A-2006-609-A	AUDIO BOARD, COMPLETE (DECK A)	
* 269	A-2006-610-A	AUDIO BOARD, COMPLETE (DECK B)	
* 270	1-638-020-11	LEAF SW BOARD	
271	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
272	X-3362-078-1	TABLE ASSY (B), REEL	
HP901	A-2003-838-A	DECK ASSY, HEAD (DECK A)	
HRPE901A	2004-190-A	DECK ASSY, HEAD (DECK B)	
M901	X-3359-417-1	MOTOR ASSY (CAPSTAN)	
M902	X-3363-501-1	MOTOR ASSY (REEL)	

(6) MECHANISM SECTION-2  
 (DECK A :TCM-190RA12CL)  
 (DECK B :TCM-190RB22CL)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	X-3359-415-1	CHASSIS ASSY, MECHANICAL		309	3-359-429-01	SLIDER (BRAKE PLATE)	
302	3-359-469-01	SPACER		310	3-359-420-01	GEAR (CAM GEAR)	
* 303	3-359-425-01	SLIDER (REVERSE SLIDER)		311	3-359-456-01	SPRING (TRIGGER SPRING), TORSION	
304	3-359-426-01	LEVER (REVERSE LEVER)		312	X-3359-405-1	LEVER (FR ARM) ASSY	
* 305	3-359-427-01	SLIDER (LEVERSE SLIDER)		313	3-359-453-01	SPRING (FR ARM), TORSION	
* 306	3-359-415-01	SLIDER (TRIGGER SLIDER)		314	3-359-419-01	GEAR (FR GEAR)	
307	3-359-448-01	GEAR (TRIGGER)		315	3-359-421-01	CLUTCH (REEL DISK)	
308	3-359-454-01	SPRING, TORSION		316	3-359-418-01	PULLEY (FR PULLEY)	

# SECTION 5

## ELECTRICAL PARTS LIST

AUDIO-A

AUDIO-B

### NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

### SEMICONDUCTORS

In each case, u:  $\mu$ , for example:

uA...:  $\mu$ A.. uPA...:  $\mu$ PA..

uPB...:  $\mu$ PB.. uPC...:  $\mu$ PC.. uPD...:  $\mu$ PD..

### CAPACITORS

uF:  $\mu$ F

### COILS

uH:  $\mu$ H

### Abbreviations

AUS: Australian Model

IT: Italian Model

EA: Saudi Arabia Model

MY: Malaysia Model

EE: East European Model

SP: Singapore Model

G: Germany Model

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
*	A-2006-623-A	AUDIO-A BOARD, COMPLETE *****	
		< CAPACITOR >	
C11	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C12	1-136-157-00	FILM 0.022uF	5% 50V
C13	1-124-234-00	ELECT 22uF	20% 16V
C18	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C21	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C22	1-136-157-00	FILM 0.022uF	5% 50V
C23	1-124-234-00	ELECT 22uF	20% 16V
C28	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C31	1-124-234-00	ELECT 22uF	20% 16V
C32	1-124-234-00	ELECT 22uF	20% 16V
C72	1-124-499-11	ELECT, NONPOLAR 1uF	20% 50V
		< JACK >	
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD	
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P	
		< CONNECTOR >	
* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P	
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
		< IC >	
IC31	8-759-106-02	IC uPC4570G2	
		< JUMPER RESISTOR >	
JW1	1-216-295-00	METAL CHIP 0	5% 1/10W
JW51	1-216-296-00	METAL CHIP 0	5% 1/8W
JW52	1-216-296-00	METAL CHIP 0	5% 1/8W
JW53	1-216-296-00	METAL CHIP 0	5% 1/8W
JW54	1-216-296-00	METAL CHIP 0	5% 1/8W

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q71	8-729-216-22	TRANSISTOR 2SA1162-G	
		< RESISTOR >	
R11	1-216-099-00	METAL CHIP 120K	5% 1/10W
R12	1-216-025-00	METAL CHIP 100	5% 1/10W
R13	1-216-100-00	METAL GLAZE 130K	5% 1/10W
R14	1-216-067-00	METAL CHIP 5.6K	5% 1/10W
R21	1-216-099-00	METAL CHIP 120K	5% 1/10W
R22	1-216-025-00	METAL CHIP 100	5% 1/10W
R23	1-216-100-00	METAL GLAZE 130K	5% 1/10W
R24	1-216-067-00	METAL CHIP 5.6K	5% 1/10W
R31	1-216-033-00	METAL CHIP 220	5% 1/10W
R32	1-216-033-00	METAL CHIP 220	5% 1/10W
R71	1-216-082-00	METAL GLAZE 24K	5% 1/10W
R72	1-216-081-00	METAL CHIP 22K	5% 1/10W
R73	1-216-089-00	METAL CHIP 47K	5% 1/10W
R74	1-216-089-00	METAL CHIP 47K	5% 1/10W
		< VARIABLE RESISTOR >	
RV11	1-238-012-11	RES, ADJ, CARBON 1K	
RV21	1-238-012-11	RES, ADJ, CARBON 1K	
RV71	1-238-016-11	RES, ADJ, CARBON 10K	
RV72	1-238-016-11	RES, ADJ, CARBON 10K	
		*****	
*	A-2006-624-A	AUDIO-B BOARD, COMPLETE *****	
		< CAPACITOR >	
C11	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C12	1-136-157-00	FILM 0.022uF	5% 50V
C13	1-124-234-00	ELECT 22uF	20% 16V
C14	1-136-273-91	FILM 75PF	5% 630V
C15	1-164-080-11	CERAMIC 390PF	10% 50V

# AUDIO-B

Ref. No.	Part No.	Description	Remark
C17	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C18	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C21	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C22	1-136-157-00	FILM 0.022uF	5% 50V
C23	1-124-234-00	ELECT 22uF	20% 16V
C24	1-136-273-91	FILM 75PF	5% 630V
C25	1-164-080-11	CERAMIC 390PF	10% 50V
C27	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C28	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C31	1-124-234-00	ELECT 22uF	20% 16V
C32	1-124-234-00	ELECT 22uF	20% 16V
C33	1-124-234-00	ELECT 22uF	20% 16V
C51	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C52	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C53	1-163-022-00	CERAMIC CHIP 0.012uF	10% 50V
C54	1-136-559-11	FILM 0.0047uF	5% 630V
C56	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C57	1-164-346-11	CERAMIC CHIP 1uF	16V
C58	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V
C72	1-124-499-11	ELECT, NONPOLAR 1uF	20% 50V

## < JACK >

* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P

## < CONNECTOR >

* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P

## < DIODE >

D31	8-719-404-46	DIODE MA110
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## < IC >

IC31	8-759-106-02	IC uPC4570G2
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## < JUMPER RESISTOR >

JW1	1-216-296-00	METAL CHIP	0	5%	1/8W
JW2	1-216-295-00	METAL CHIP	0	5%	1/10W
JW3	1-216-295-00	METAL CHIP	0	5%	1/10W
JW4	1-216-295-00	METAL CHIP	0	5%	1/10W
JW6	1-216-295-00	METAL CHIP	0	5%	1/10W
JW7	1-216-295-00	METAL CHIP	0	5%	1/10W
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W
JW55	1-216-296-00	METAL CHIP	0	5%	1/8W

Ref. No.	Part No.	Description	Remark
JW56	1-216-296-00	METAL CHIP	0 5% 1/8W
JW57	1-216-296-00	METAL CHIP	0 5% 1/8W
JW58	1-216-296-00	METAL CHIP	0 5% 1/8W
JW59	1-216-296-00	METAL CHIP	0 5% 1/8W
JW60	1-216-296-00	METAL CHIP	0 5% 1/8W
JW61	1-216-296-00	METAL CHIP	0 5% 1/8W
JW62	1-216-296-00	METAL CHIP	0 5% 1/8W
JW63	1-216-296-00	METAL CHIP	0 5% 1/8W

## < COIL >

L11	1-410-780-11	INDUCTOR 27mH
L21	1-410-780-11	INDUCTOR 27mH

## < TRANSISTOR >

Q51	8-729-111-29	TRANSISTOR 2SD1616A-K
Q52	8-729-111-29	TRANSISTOR 2SD1616A-K
Q53	8-729-111-29	TRANSISTOR 2SD1616A-K
Q71	8-729-216-22	TRANSISTOR 2SA1162-G

## < RESISTOR >

R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R15	1-249-430-11	CARBON	12K	5%	1/4W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R25	1-249-430-11	CARBON	12K	5%	1/4W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R41	1-249-393-11	CARBON	10	5%	1/4W F
R42	1-249-393-11	CARBON	10	5%	1/4W F
R51	1-216-075-00	METAL CHIP	12K	5%	1/10W
R52	1-216-075-00	METAL CHIP	12K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W

## < VARIABLE RESISTOR >

RV11	1-238-012-11	RES, ADJ, CARBON 1K
RV12	1-238-551-11	RES, ADJ, CARBON 220K
RV21	1-238-012-11	RES, ADJ, CARBON 1K

Ref.No.	Part No.	Description	Remark
RV22	1-238-551-11	RES, ADJ, CARBON 220K	
RV71	1-238-016-11	RES, ADJ, CARBON 10K	
RV72	1-238-016-11	RES, ADJ, CARBON 10K	
< RELAY >			
RY31	1-515-726-11	RELAY	
< TRANSFORMER >			
T51	1-406-419-11	COIL, BIAS OSCILLATION	
*****			
A-4617-161-A BD BOARD, COMPLETE			
*****			
< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C102	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V
C103	1-126-163-11	ELECT 4.7uF	20% 50V
C104	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C105	1-126-154-11	ELECT 47uF	20% 6.3V
C106	1-126-154-11	ELECT 47uF	20% 6.3V
C107	1-126-154-11	ELECT 47uF	20% 6.3V
C108	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C109	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C110	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V
C111	1-131-367-00	TANTALUM 22uF	10% 20V
C112	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C113	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C114	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C115	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C117	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C118	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C119	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C120	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V
C151	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C152	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C153	1-163-006-11	CERAMIC CHIP 560PF	10% 50V
C154	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C155	1-163-023-00	CERAMIC CHIP 0.015uF	5% 50V
C171	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C172	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C173	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C174	1-163-038-00	CERAMIC CHIP 0.1uF	25V
< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P	
CN102	1-568-795-11	SOCKET, CONNECTOR 12P	
CN103	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P	

Ref.No.	Part No.	Description	Remark
< DIODE >			
D101	8-719-021-25	DIODE UZM4.7X	
< IC >			
IC101	8-752-058-77	IC CXA1372AQ	
IC102	8-759-822-36	IC LA6532M	
IC103	8-759-633-65	IC M54641L	
< JACK >			
J101	1-216-295-00	METAL CHIP 0 5% 1/10W	
J102	1-216-295-00	METAL CHIP 0 5% 1/10W	
< MOTOR >			
M101	X-4917-504-1	MOTOR ASSY (SLED)	
< TRANSISTOR >			
Q101	8-729-901-01	TRANSISTOR DTC144EK	
< RESISTOR >			
R101	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R102	1-216-095-00	METAL CHIP 82K 5% 1/10W	
R103	1-216-091-00	METAL CHIP 56K 5% 1/10W	
R104	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R105	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R106	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R107	1-216-114-00	METAL GLAZE 510K 5% 1/10W	
R108	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R109	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R110	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R111	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R112	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R113	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R114	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R152	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R153	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R154	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R155	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R156	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R157	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R158	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R159	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R160	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R171	1-216-001-00	METAL CHIP 10 5% 1/10W	
R172	1-216-001-00	METAL CHIP 10 5% 1/10W	
R173	1-216-001-00	METAL CHIP 10 5% 1/10W	
R174	1-216-001-00	METAL CHIP 10 5% 1/10W	
< VARIABLE RESISTOR >			
RV101	1-238-016-11	RES, ADJ, CARBON 10K	
RV102	1-238-016-11	RES, ADJ, CARBON 10K	

# CD MAIN

Ref. No.	Part No.	Description	Remark		
< SWITCH >					
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
*****					
*	A-4356-652-A	CD MAIN BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)	*****		
*	A-4356-661-A	CD MAIN BOARD, COMPLETE (D209:UK, G/D309:UK, G)	*****		
7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S					
< CAPACITOR >					
C500	1-124-564-11	ELECT	4700uF	20%	25V
C501	1-126-946-11	ELECT	6800uF	20%	25V
C502	1-126-176-11	ELECT	220uF	20%	10V
C503	1-124-907-11	ELECT	10uF	20%	50V
C504	1-124-903-11	ELECT	1uF	20%	50V
C505	1-124-907-11	ELECT	10uF	20%	50V
C506	1-124-472-11	ELECT	470uF	20%	10V
C507	1-164-159-11	CERAMIC	0.1uF		50V
C508	1-124-472-11	ELECT	470uF	20%	10V
C509	1-164-159-11	CERAMIC	0.1uF		50V
C510	1-136-165-00	FILM	0.1uF	5%	50V
C511	1-136-165-00	FILM	0.1uF	5%	50V
C512	1-124-443-00	ELECT	100uF	20%	10V
C513	1-164-159-11	CERAMIC	0.1uF		50V
C515	1-136-161-00	FILM	0.047uF	5%	50V
C516	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C517	1-124-443-00	ELECT	100uF	20%	10V
C518	1-124-902-00	ELECT	0.47uF	20%	50V
C519	1-136-153-00	FILM	0.01uF	5%	50V
C520	1-124-443-00	ELECT	100uF	20%	10V
C521	1-136-165-00	FILM	0.1uF	5%	50V
C522	1-124-472-11	ELECT	470uF	20%	10V
C524	1-126-176-11	ELECT	220uF	20%	10V
C525	1-164-159-11	CERAMIC	0.1uF		50V
C526	1-124-443-00	ELECT	100uF	20%	10V
C527	1-161-494-00	CERAMIC	0.022uF		25V
C528	1-162-196-31	CERAMIC	5.6PF	10%	50V
C529	1-162-196-31	CERAMIC	5.6PF	10%	50V
C530	1-124-443-00	ELECT	100uF	20%	10V
C531	1-161-494-00	CERAMIC	0.022uF		25V
C532	1-162-283-31	CERAMIC	120PF	10%	50V
C533	1-162-283-31	CERAMIC	120PF	10%	50V
C534	1-110-335-11	MYLAR	100PF	5%	50V
C534	1-137-358-91	FILM	0.0001uF	5%	50V
C535	1-110-335-11	MYLAR	100PF	5%	50V

Ref.No.	Part No.	Description	Remark			
C535	1-137-358-91	FILM	0.0001uF	5%	50V	
C536	1-110-335-11	MYLAR	100PF	5%	50V	
C536	1-137-358-91	FILM	0.0001uF	5%	50V	
C537	1-110-335-11	MYLAR	100PF	5%	50V	
C537	1-137-358-91	FILM	0.0001uF	5%	50V	
C538	1-164-159-11	CERAMIC	0.1uF		50V	
C539	1-164-159-11	CERAMIC	0.1uF		50V	
C542	1-130-471-00	MYLAR	0.001uF	5%	50V	
C542	1-137-364-11	FILM	0.001uF	5%	50V	
C543	1-130-471-00	MYLAR	0.001uF	5%	50V	
C543	1-137-364-11	FILM	0.001uF	5%	50V	
C544	1-124-907-11	ELECT	10uF	20%	50V	
C545	1-124-907-11	ELECT	10uF	20%	50V	
C548	1-124-472-11	ELECT	470uF	20%	10V	
C549	1-124-443-00	ELECT	100uF	20%	10V	
C550	1-124-907-11	ELECT	10uF	20%	50V	
C551	1-124-907-11	ELECT	10uF	20%	50V	
C552	1-164-159-11	CERAMIC	0.1uF		50V	
C553	1-164-159-11	CERAMIC	0.1uF		50V	
C554	1-130-480-00	MYLAR	0.0056uF	5%	50V	
C554	1-137-437-11	FILM	0.0056uF	5%	50V	
C555	1-130-480-00	MYLAR	0.0056uF	5%	50V	
C555	1-137-437-11	FILM	0.0056uF	5%	50V	
C560	1-164-159-11	CERAMIC	0.1uF		50V	
C561	1-164-159-11	CERAMIC	0.1uF		50V	
C600	1-162-286-31	CERAMIC	220PF	10%	50V	
C601	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C602	1-162-286-31	CERAMIC	220PF	10%	50V	
C603	1-110-339-11	MYLAR	220PF	5%	50V	
C603	1-137-360-91	FILM	220PF	5%	50V	
C604	1-110-339-11	MYLAR	220PF	5%	50V	
C604	1-137-360-91	FILM	220PF	5%	50V	
C605	1-164-159-11	CERAMIC	0.1uF		50V	
C607	1-161-494-00	CERAMIC	0.022uF		25V	
C608	1-164-159-11	CERAMIC	0.1uF		50V	
C609	1-164-159-11	CERAMIC	0.1uF		50V	
C610	1-124-572-11	ELECT	100uF	20%	63V	
C611	1-164-159-11	CERAMIC	0.1uF		50V	
C612	1-124-907-11	ELECT	10uF	20%	50V	
C613	1-164-159-11	CERAMIC	0.1uF		50V	
C614	1-124-443-00	ELECT	100uF	20%	10V	
C615	1-124-472-11	ELECT	470uF	20%	10V	
C616	1-164-159-11	CERAMIC	0.1uF		50V	
C801	1-162-290-31	CERAMIC	470PF	10%	50V	

## < CONNECTOR >

* CN501	1-568-842-11	SOCKET, CONNECTOR 27P				
* CN502	1-568-822-11	SOCKET, CONNECTOR 22P				
* CN600	1-565-291-11	SOCKET, CONNECTOR 13P (SYSTEM CONTROL)				

Ref. No.	Part No.	Description	Remark
* CN601	1-564-511-11	PLUG, CONNECTOR 8P	
< DIODE >			
D504	8-719-000-54	DIODE UZL-6L3	
D505	8-719-987-63	DIODE 1N4148M	
D506	8-719-000-54	DIODE UZL-6L3	
D507	8-719-210-21	DIODE 11EQS04	
D508	8-719-987-63	DIODE 1N4148M	
D600	8-719-200-82	DIODE 11ES2	
D601	8-719-200-82	DIODE 11ES2	
D602	8-719-200-82	DIODE 11ES2	
D603	8-719-933-54	DIODE HZS9A2L	
D607	8-719-987-63	DIODE 1N4148M	
D608	8-719-987-63	DIODE 1N4148M	
D801	8-719-500-36	DIODE D2SB20	
< FERRITE BEAD >			
FB601	1-412-473-21	INDUCTOR 0UH	
FB602	1-412-473-21	INDUCTOR 0UH	
FB603	1-412-473-51	INDUCTOR 0UH	
FB604	1-412-473-21	INDUCTOR 0UH	
< IC >			
IC500	8-759-071-48	IC TA7807S	
IC501	8-759-630-21	IC M5290P-16	
IC502	8-752-352-93	IC CXD2500BQ	
IC503	8-752-355-45	IC CXD2565M	
IC504	8-759-000-49	IC MC1406BCP	
IC505	8-759-633-42	IC M5293L	
IC506	8-759-634-51	IC M5218AP	
IC507	8-759-634-51	IC M5218AP	
< COIL >			
L501	1-410-513-11	INDUCTOR 22uH	
< IC LINK >			
PS500	1-532-685-00	LINK, IC	
PS501	1-532-637-00	LINK, IC 1.0A	
< TRANSISTOR >			
Q500	8-729-140-96	TRANSISTOR 2SD774-34	
Q501	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q502	8-729-900-65	TRANSISTOR DTA144ES	
Q503	8-729-900-65	TRANSISTOR DTA144ES	
Q504	8-729-900-65	TRANSISTOR DTA144ES	
Q505	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q506	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q507	8-729-119-78	TRANSISTOR 2SC2785-HFE	

Ref. No.	Part No.	Description	Remark
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q600	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q601	8-729-900-89	TRANSISTOR DTC144ES	
Q602	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< RESISTOR >			
R500	1-249-425-11	CARBON 4.7K 5%	1/4W F
R501	1-249-425-11	CARBON 4.7K 5%	1/4W F
R502	1-249-423-11	CARBON 3.3K 5%	1/4W F
R504	1-249-417-11	CARBON 1K 5%	1/4W F
R505	1-249-417-11	CARBON 1K 5%	1/4W F
R506	1-249-417-11	CARBON 1K 5%	1/4W F
R507	1-249-417-11	CARBON 1K 5%	1/4W F
R511	1-249-423-11	CARBON 3.3K 5%	1/4W F
R512	1-249-423-11	CARBON 3.3K 5%	1/4W F
R513	1-249-429-11	CARBON 10K 5%	1/4W
R514	1-249-441-11	CARBON 100K 5%	1/4W
R515	1-249-429-11	CARBON 10K 5%	1/4W
R516	1-249-417-11	CARBON 1K 5%	1/4W F
R517	1-249-417-11	CARBON 1K 5%	1/4W F
R518	1-249-420-11	CARBON 1.8K 5%	1/4W F
R519	1-249-417-11	CARBON 1K 5%	1/4W F
R520	1-249-429-11	CARBON 10K 5%	1/4W
R521	1-249-433-11	CARBON 22K 5%	1/4W
R522	1-249-433-11	CARBON 22K 5%	1/4W
R523	1-249-433-11	CARBON 22K 5%	1/4W
R524	1-249-433-11	CARBON 22K 5%	1/4W
R525	1-249-425-11	CARBON 4.7K 5%	1/4W F
R526	1-249-433-11	CARBON 22K 5%	1/4W
R527	1-249-433-11	CARBON 22K 5%	1/4W
R528	1-249-433-11	CARBON 22K 5%	1/4W
R529	1-249-433-11	CARBON 22K 5%	1/4W
R530	1-249-433-11	CARBON 22K 5%	1/4W
R531	1-249-433-11	CARBON 22K 5%	1/4W
R532	1-249-433-11	CARBON 22K 5%	1/4W
R533	1-249-433-11	CARBON 22K 5%	1/4W
R534	1-249-419-11	CARBON 1.5K 5%	1/4W F
R535	1-249-419-11	CARBON 1.5K 5%	1/4W F
R536	1-249-419-11	CARBON 1.5K 5%	1/4W F
R537	1-249-419-11	CARBON 1.5K 5%	1/4W F
R538	1-249-421-11	CARBON 2.2K 5%	1/4W F
R539	1-249-421-11	CARBON 2.2K 5%	1/4W F
R542	1-249-441-11	CARBON 100K 5%	1/4W
R543	1-249-441-11	CARBON 100K 5%	1/4W
R544	1-249-425-11	CARBON 4.7K 5%	1/4W F
R545	1-249-425-11	CARBON 4.7K 5%	1/4W F
R548	1-249-425-11	CARBON 4.7K 5%	1/4W F
R549	1-249-425-11	CARBON 4.7K 5%	1/4W F

## CD MAIN

## CD PANEL

Ref. No.	Part No.	Description	Remark		
R550	1-249-413-11	CARBON	470	5%	1/4W F
R551	1-249-441-11	CARBON	100K	5%	1/4W
R552	1-249-441-11	CARBON	100K	5%	1/4W
R553	1-249-441-11	CARBON	100K	5%	1/4W
R600	1-249-409-11	CARBON	220	5%	1/4W F
R601	1-249-409-11	CARBON	220	5%	1/4W F
R602	1-249-433-11	CARBON	22K	5%	1/4W
R603	1-249-433-11	CARBON	22K	5%	1/4W
R604	1-249-433-11	CARBON	22K	5%	1/4W
R609	1-249-435-11	CARBON	33K	5%	1/4W
R610	1-249-438-11	CARBON	56K	5%	1/4W
R611	1-249-429-11	CARBON	10K	5%	1/4W
R612	1-249-429-11	CARBON	10K	5%	1/4W
R613	1-249-417-11	CARBON	1K	5%	1/4W F
R614	1-249-429-11	CARBON	10K	5%	1/4W
R615	1-249-433-11	CARBON	22K	5%	1/4W
R616	1-249-393-11	CARBON	10	5%	1/4W F
R617	1-249-413-11	CARBON	470	5%	1/4W F
R801	1-249-405-11	CARBON	100	5%	1/4W F
< TRANSFORMER >					
△T500	1-423-426-11	TRANSFORMER, POWER			
< VIBRATOR >					
X501	1-579-833-21	VIBRATOR, CRYSTAL 33MHz			
*****					
*	A-4356-653-A	CD PANEL BOARD, COMPLETE (D209:AEP, E, IT, EE, EA, AUS, MY, SP/D309:AEP, E, IT, EA, EE, MY, SP, CIS, AUS)			
*****					
*	A-4356-662-A	CD PANEL BOARD, COMPLETE (D209:UK, G/D309:UK, G)			
*****					
*	4-955-816-01	HOLDER (1F), FL TUBE			
< CAPACITOR >					
C702	1-161-494-00	CERAMIC	0.022uF		25V
C703	1-161-494-00	CERAMIC	0.022uF		25V
C704	1-161-494-00	CERAMIC	0.022uF		25V
C705	1-164-159-11	CERAMIC	0.1uF		50V
C706	1-124-126-00	ELECT	47uF	20%	10V
< CONNECTOR >					
* CN701	1-568-842-11	SOCKET, CONNECTOR 27P			
< COMPOSITION CIRCUIT BLOCK >					
CP701	1-239-612-11	COMPOSITION CIRCUIT BLOCK			
CP702	1-239-613-11	COMPOSITION CIRCUIT BLOCK			

Ref. No.	Part No.	Description	Remark		
< DIODE >					
D701	8-719-987-63	DIODE 1N4148M			
D702	8-719-987-63	DIODE 1N4148M			
D703	8-719-987-63	DIODE 1N4148M			
D704	8-719-987-63	DIODE 1N4148M			
D705	8-719-987-63	DIODE 1N4148M			
D706	8-719-987-63	DIODE 1N4148M			
D707	8-719-987-63	DIODE 1N4148M			
D708	8-719-987-63	DIODE 1N4148M			
D709	8-719-987-63	DIODE 1N4148M			
D710	8-719-987-63	DIODE 1N4148M			
D711	8-719-987-63	DIODE 1N4148M			
D712	8-719-001-21	DIODE UZL-9H1			
< FLUORESCENT INDICATOR >					
FLD701	1-519-681-21	INDICATOR TUBE, FLUORESCENT			
< IC >					
IC701	8-759-156-33	IC uPD75216ACW-W32			
< RESISTOR >					
R701	1-249-435-11	CARBON	33K	5%	1/4W
R702	1-249-435-11	CARBON	33K	5%	1/4W
R703	1-249-435-11	CARBON	33K	5%	1/4W
R704	1-249-435-11	CARBON	33K	5%	1/4W
R705	1-249-435-11	CARBON	33K	5%	1/4W
R706	1-249-425-11	CARBON	4.7K	5%	1/4W F
R707	1-249-425-11	CARBON	4.7K	5%	1/4W F
R708	1-249-439-11	CARBON	68K	5%	1/4W
< SWITCH >					
S701	1-554-303-21	SWITCH, TACTILE (PROGRAM)			
S702	1-554-303-21	SWITCH, TACTILE (REPEAT)			
S703	1-554-303-21	SWITCH, TACTILE (PAUSE)			
S704	1-554-303-21	SWITCH, TACTILE (▶▶)			
S705	1-554-303-21	SWITCH, TACTILE (CONTINUE)			
S706	1-554-303-21	SWITCH, TACTILE (FADER)			
S707	1-554-303-21	SWITCH, TACTILE (PLAY)			
S708	1-554-303-21	SWITCH, TACTILE (AMS ◀◀)			
S709	1-554-303-21	SWITCH, TACTILE (SHUFFLE)			
S710	1-554-303-21	SWITCH, TACTILE (TIME)			
S711	1-554-303-21	SWITCH, TACTILE (◀◀)			
S712	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)			
S713	1-554-303-21	SWITCH, TACTILE (STOP)			
S714	1-554-303-21	SWITCH, TACTILE (AMS ▶▶)			
S715	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)			

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



## CD PANEL

## LEAF SW-A

## LEAF SW-B

## LOADING

## TC MAIN

Ref.No.	Part No.	Description	Remark
S716	1-554-303-21	SWITCH, TACTILE (TIME SET)	
S718	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S719	1-554-303-21	SWITCH, TACTILE (1)	
S720	1-554-303-21	SWITCH, TACTILE (6)	
S721	1-554-303-21	SWITCH, TACTILE (11)	
S723	1-554-303-21	SWITCH, TACTILE (2)	
S724	1-554-303-21	SWITCH, TACTILE (7)	
S725	1-554-303-21	SWITCH, TACTILE (12)	
S727	1-554-303-21	SWITCH, TACTILE (3)	
S728	1-554-303-21	SWITCH, TACTILE (8)	
S731	1-554-303-21	SWITCH, TACTILE (4)	
S732	1-554-303-21	SWITCH, TACTILE (9)	
S734	1-554-303-21	SWITCH, TACTILE (5)	
S736	1-554-303-21	SWITCH, TACTILE (10)	
S739	1-554-303-21	SWITCH, TACTILE (>12)	
S740	1-554-303-21	SWITCH, TACTILE (CHECK)	
S741	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S742	1-554-303-21	SWITCH, TACTILE (A. SPACE/A. CUE)	

## &lt; VIBRATOR &gt;

X701 1-577-082-11 VIBRATOR, CERAMIC 4MHz

\*\*\*\*\*

\* 1-638-020-11 LEAF SW-A BOARD

\*\*\*\*\*

## &lt; CONNECTOR &gt;

\* CNP81 1-568-850-11 SOCKET, CONNECTOR 7P

## &lt; IC &gt;

IC81 8-719-710-03 DIODE NJL5165K-B

## &lt; RESISTOR &gt;

R84	1-249-417-11	CARBON	1K	5%	1/4W	F
R85	1-249-408-11	CARBON	180	5%	1/4W	F

## &lt; SWITCH &gt;

S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)
S82	1-571-281-21	SWITCH, LEAF (TYPE II DET)
S86	1-571-281-21	SWITCH, LEAF (HALF DET)

\*\*\*\*\*

\* 1-638-020-11 LEAF SW-B BOARD

\*\*\*\*\*

8-719-710-03 DIODE NJL5165K-B

## &lt; CONNECTOR &gt;

\* CNP81 1-568-850-11 SOCKET, CONNECTOR 7P

Ref.No.	Part No.	Description	Remark
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## &lt; RESISTOR &gt;

R81	1-249-414-11	CARBON	560	5%	1/4W	F
R82	1-247-818-11	CARBON	300	5%	1/4W	
R83	1-247-834-11	CARBON	1.3K	5%	1/4W	
R84	1-249-417-11	CARBON	1K	5%	1/4W	F
R85	1-249-408-11	CARBON	180	5%	1/4W	F

## &lt; SWITCH &gt;

S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)
S82	1-571-281-21	SWITCH, LEAF (TYPE II DET)
S84	1-571-281-21	SWITCH, LEAF (ERASE PROOF)
S85	1-571-281-21	SWITCH, LEAF (ERASE PROOF)
S86	1-571-281-21	SWITCH, LEAF (HALF DET)

\*\*\*\*\*

\* 1-632-202-11 LOADING BOARD

\*\*\*\*\*

## &lt; CONNECTOR &gt;

\* CN301 1-564-707-11 PIN, CONNECTOR (SMALL TYPE) 5P

## &lt; MOTOR &gt;

M201 X-4604-363-A MOTOR (L) ASSY

## &lt; SWITCH &gt;

S271	1-572-086-11	SWITCH, LEAF
S272	1-572-086-11	SWITCH, LEAF

\*\*\*\*\*

\* A-4356-643-A TC MAIN BOARD, COMPLETE (D209: AEP, E, IT, EE, EA, AUS, MY, SP/D309: AEP, E, IT, EA, EE, MY, SP, CIS, AUS)

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\* A-4356-654-A TC MAIN BOARD, COMPLETE (D209: UK, G/D309: UK, G)

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\* 4-942-204-01 PLATE, GROUND

## &lt; CAPACITOR &gt;

C122	1-130-479-00	MYLAR	0.0047uF	5%	50V
C123	1-162-291-31	CERAMIC	560PF	10%	50V
C126	1-136-165-00	FILM	0.1uF	5%	50V
C127	1-126-791-11	ELECT	10uF	20%	35V
C128	1-126-301-11	ELECT	1uF	20%	50V
C129	1-124-465-00	ELECT	0.47uF	20%	50V
C130	1-126-791-11	ELECT	10uF	20%	35V
C131	1-164-159-11	CERAMIC	0.1uF	5%	50V
C132	1-126-791-11	ELECT	10uF	20%	35V
C141	1-126-301-11	ELECT	1uF	20%	50V
C142	1-126-791-11	ELECT	10uF	20%	35V
C143	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C222	1-130-479-00	MYLAR	0.0047uF	5%	50V
C223	1-162-291-31	CERAMIC	560PF	10%	50V
C226	1-136-165-00	FILM	0.1uF	5%	50V

# TC MAIN

Ref. No.	Part No.	Description	Remark
C227	1-126-791-11	ELECT	10uF 20% 35V
C228	1-126-301-11	ELECT	1uF 20% 50V
C229	1-124-465-00	ELECT	0.47uF 20% 50V
C230	1-126-791-11	ELECT	10uF 20% 35V
C231	1-161-377-00	CERAMIC	0.0047uF 20% 16V
C232	1-161-375-00	CERAMIC	0.0022uF 20% 50V
C233	1-124-465-00	ELECT	0.47uF 20% 50V
C241	1-126-301-11	ELECT	1uF 20% 50V
C242	1-126-791-11	ELECT	10uF 20% 35V
C243	1-161-375-00	CERAMIC	0.0022uF 20% 50V
C301	1-126-791-11	ELECT	10uF 20% 35V
C302	1-126-926-11	ELECT	1000uF 20% 10V
C303	1-123-382-00	ELECT	3.3uF 20% 100V
C304	1-164-159-11	CERAMIC	0.1uF 50V
C305	1-164-159-11	CERAMIC	0.1uF 50V
C306	1-126-933-11	ELECT	100uF 20% 16V
C307	1-126-933-11	ELECT	100uF 20% 16V
C308	1-126-926-11	ELECT	1000uF 20% 10V
C309	1-126-926-11	ELECT	1000uF 20% 10V
C310	1-126-791-11	ELECT	10uF 20% 35V
C311	1-126-791-11	ELECT	10uF 20% 35V
C312	1-126-949-11	ELECT	220uF 20% 35V
C314	1-124-584-00	ELECT	100uF 20% 10V
C315	1-126-926-11	ELECT	1000uF 20% 10V
C316	1-126-933-11	ELECT	100uF 20% 16V
C317	1-126-933-11	ELECT	100uF 20% 16V
C318	1-126-933-11	ELECT	100uF 20% 16V
C456	1-162-290-31	CERAMIC	470PF 10% 50V
C457	1-162-290-31	CERAMIC	470PF 10% 50V
C458	1-164-159-11	CERAMIC	0.1uF 50V
C459	1-164-159-11	CERAMIC	0.1uF 50V
< CONNECTOR >			
* CN101	1-564-523-11	PLUG, CONNECTOR 8P	
* CN301	1-564-519-11	PLUG, CONNECTOR 4P	
* CN302	1-564-506-11	PLUG, CONNECTOR 3P	
* CN303	1-564-506-11	PLUG, CONNECTOR 3P	
* CN401	1-564-517-11	PLUG, CONNECTOR 2P	
CN402	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN403	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN404	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN405	1-568-437-11	SOCKET, CONNECTOR 7P	
CN406	1-568-437-11	SOCKET, CONNECTOR 7P	
CN407	1-568-441-11	SOCKET, CONNECTOR 9P	
CN408	1-568-444-11	SOCKET, CONNECTOR 13P	
< DIODE >			
D301	8-719-000-78	DIODE UZL-7L2	

Ref. No.	Part No.	Description	Remark
D302	8-719-987-63	DIODE 1N4148M	
D303	8-719-987-63	DIODE 1N4148M	
D304	8-719-987-63	DIODE 1N4148M	
D305	8-719-200-82	DIODE 11ES2	
D306	8-719-200-82	DIODE 11ES2	
D401	8-719-987-63	DIODE 1N4148M	
D402	8-719-987-63	DIODE 1N4148M	
D403	8-719-987-63	DIODE 1N4148M	
< IC >			
IC101	8-759-098-75	IC HA12171NT	
IC301	8-759-071-48	IC M5F7807L	
IC401	8-759-076-36	IC M50964-SOX-1044	
IC402	8-759-635-63	IC M51943BSL	
IC403	8-759-207-05	IC TA7272P	
< TRANSISTOR >			
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q400	8-729-900-65	TRANSISTOR DTA144ES	
Q401	8-729-900-65	TRANSISTOR DTA144ES	
Q402	8-729-900-65	TRANSISTOR DTA144ES	
Q403	8-729-900-65	TRANSISTOR DTA144ES	
Q404	8-729-900-65	TRANSISTOR DTA144ES	
Q405	8-729-900-65	TRANSISTOR DTA144ES	
Q406	8-729-900-89	TRANSISTOR DTC144ES	
Q407	8-729-900-89	TRANSISTOR DTC144ES	
Q408	8-729-900-65	TRANSISTOR DTA144ES	
Q409	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q410	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q411	8-729-801-84	TRANSISTOR 2SB1013-4	
Q412	8-729-801-84	TRANSISTOR 2SB1013-4	
Q413	8-729-900-65	TRANSISTOR DTA144ES	
Q414	8-729-900-89	TRANSISTOR DTC144ES	
< RESISTOR >			
R120	1-215-451-00	METAL	18K 1% 1/6W
R121	1-249-430-11	CARBON	12K 5% 1/4W
R122	1-249-431-11	CARBON	15K 5% 1/4W
R123	1-249-425-11	CARBON	4.7K 5% 1/4W F
R124	1-249-428-11	CARBON	8.2K 5% 1/4W F
R125	1-249-429-11	CARBON	10K 5% 1/4W
R127	1-249-429-11	CARBON	10K 5% 1/4W
R130	1-249-429-11	CARBON	10K 5% 1/4W
R131	1-249-425-11	CARBON	4.7K 5% 1/4W F
R132	1-249-429-11	CARBON	10K 5% 1/4W
R133	1-249-429-11	CARBON	10K 5% 1/4W
R135	1-247-864-11	CARBON	24K 5% 1/4W

**TC MAIN**
**TC PANEL (A)**

Ref.No.	Part No.	Description	Remark		
R136	1-249-429-11	CARBON	10K	5%	1/4W
R137	1-249-429-11	CARBON	10K	5%	1/4W
R138	1-249-429-11	CARBON	10K	5%	1/4W
R141	1-249-421-11	CARBON	2.2K	5%	1/4W F
R142	1-249-428-11	CARBON	8.2K	5%	1/4W F
R143	1-247-840-00	CARBON	2.4K	5%	1/4W
R144	1-249-433-11	CARBON	22K	5%	1/4W
R145	1-249-417-11	CARBON	1K	5%	1/4W F
R221	1-249-430-11	CARBON	12K	5%	1/4W
R222	1-249-431-11	CARBON	15K	5%	1/4W
R223	1-249-425-11	CARBON	4.7K	5%	1/4W F
R224	1-249-428-11	CARBON	8.2K	5%	1/4W F
R225	1-247-882-11	CARBON	130K	5%	1/4W
R226	1-247-866-11	CARBON	30K	5%	1/4W
R229	1-249-429-11	CARBON	10K	5%	1/4W
R230	1-249-432-11	CARBON	18K	5%	1/4W
R231	1-247-885-00	CARBON	180K	5%	1/4W
R241	1-249-421-11	CARBON	2.2K	5%	1/4W F
R242	1-249-428-11	CARBON	8.2K	5%	1/4W F
R243	1-247-840-00	CARBON	2.4K	5%	1/4W
R244	1-249-433-11	CARBON	22K	5%	1/4W
R245	1-249-417-11	CARBON	1K	5%	1/4W F
R300	1-249-405-11	CARBON	100	5%	1/4W F
R301	1-249-421-11	CARBON	2.2K	5%	1/4W F
R302	1-249-405-11	CARBON	100	5%	1/4W F
R303	1-249-422-11	CARBON	2.7K	5%	1/4W F
R352	1-249-393-11	CARBON	10	5%	1/4W F
R400	1-249-389-11	CARBON	4.7	5%	1/4W F
R401	1-249-429-11	CARBON	10K	5%	1/4W
R402	1-247-903-00	CARBON	1M	5%	1/4W
R403	1-247-895-00	CARBON	470K	5%	1/4W
R404	1-247-895-00	CARBON	470K	5%	1/4W
R405	1-249-408-11	CARBON	180	5%	1/4W F
R406	1-249-408-11	CARBON	180	5%	1/4W F
R407	1-249-410-11	CARBON	270	5%	1/4W F
R408	1-247-812-11	CARBON	160	5%	1/4W
R409	1-247-812-11	CARBON	160	5%	1/4W
R410	1-247-816-11	CARBON	240	5%	1/4W
R411	1-247-812-11	CARBON	160	5%	1/4W
R412	1-249-411-11	CARBON	330	5%	1/4W
R413	1-249-429-11	CARBON	10K	5%	1/4W
R414	1-249-429-11	CARBON	10K	5%	1/4W
R415	1-249-421-11	CARBON	2.2K	5%	1/4W F
R416	1-249-421-11	CARBON	2.2K	5%	1/4W F
R417	1-249-437-11	CARBON	47K	5%	1/4W
R418	1-249-429-11	CARBON	10K	5%	1/4W
R420	1-249-425-11	CARBON	4.7K	5%	1/4W F
R422	1-249-425-11	CARBON	4.7K	5%	1/4W F
R423	1-249-429-11	CARBON	10K	5%	1/4W

Ref.No.	Part No.	Description	Remark		
R425	1-249-417-11	CARBON	1K	5%	1/4W F
R426	1-249-417-11	CARBON	1K	5%	1/4W F
R427	1-249-417-11	CARBON	1K	5%	1/4W F
R431	1-249-429-11	CARBON	10K	5%	1/4W
R432	1-249-415-11	CARBON	680	5%	1/4W F
R433	1-249-429-11	CARBON	10K	5%	1/4W
R434	1-249-415-11	CARBON	680	5%	1/4W F
R435	1-249-429-11	CARBON	10K	5%	1/4W
R451	1-249-425-11	CARBON	4.7K	5%	1/4W F
R452	1-249-435-11	CARBON	33K	5%	1/4W
R453	1-249-437-11	CARBON	47K	5%	1/4W
R454	1-247-872-11	CARBON	51K	5%	1/4W
R455	1-247-862-11	CARBON	20K	5%	1/4W
R456	1-247-866-11	CARBON	30K	5%	1/4W
R457	1-247-872-11	CARBON	51K	5%	1/4W
R458	1-249-405-11	CARBON	100	5%	1/4W F
R459	1-249-381-11	CARBON	1	5%	1/4W F
R460	1-249-381-11	CARBON	1	5%	1/4W F
R461	1-249-425-11	CARBON	4.7K	5%	1/4W F
R462	1-249-435-11	CARBON	33K	5%	1/4W
R463	1-249-437-11	CARBON	47K	5%	1/4W
R464	1-247-872-11	CARBON	51K	5%	1/4W
R465	1-247-862-11	CARBON	20K	5%	1/4W
R466	1-247-866-11	CARBON	30K	5%	1/4W
R467	1-247-872-11	CARBON	51K	5%	1/4W
R468	1-249-405-11	CARBON	100	5%	1/4W F
R469	1-249-381-11	CARBON	1	5%	1/4W F
R470	1-249-381-11	CARBON	1	5%	1/4W F
R471	1-249-429-11	CARBON	10K	5%	1/4W
R472	1-249-425-11	CARBON	4.7K	5%	1/4W F
R473	1-249-434-11	CARBON	27K	5%	1/4W
R474	1-249-429-11	CARBON	10K	5%	1/4W
R476	1-249-425-11	CARBON	4.7K	5%	1/4W F
R477	1-249-434-11	CARBON	27K	5%	1/4W

**< VARIABLE RESISTOR >**

RV101	1-230-496-11	RES, ADJ, CARBON 10K
RV201	1-230-496-11	RES, ADJ, CARBON 10K

**< VIBRATOR >**

X401	1-577-358-21	VIBRATOR, CERAMIC
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\* 1-646-887-11 TC PANEL (A) BOARD

\*\*\*\*\*

**< CONNECTOR >**

CN451	1-568-442-11	SOCKET, CONNECTOR 9P
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# TC PANEL (A)

# TC PANEL (B)

Ref. No.	Part No.	Description	Remark
< DIODE >			
D481	8-719-313-65	DIODE SEL2410E-TH10	
D482	8-719-301-49	LED SEL2810A	
D483	8-719-301-49	LED SEL2810A	
< RESISTOR >			
R481	1-249-407-11	CARBON 150 5% 1/4W F	
R482	1-249-409-11	CARBON 220 5% 1/4W F	
R483	1-249-415-11	CARBON 680 5% 1/4W F	
R484	1-249-417-11	CARBON 1K 5% 1/4W F	
R485	1-249-426-11	CARBON 5.6K 5% 1/4W	
R486	1-249-430-11	CARBON 12K 5% 1/4W	
< SWITCH >			
S401	1-554-303-21	SWITCH, TACTILE (STOP)	
S402	1-554-303-21	SWITCH, TACTILE (▶)	
S403	1-554-303-21	SWITCH, TACTILE (◀)	
S404	1-554-303-21	SWITCH, TACTILE (◀▶)	
S405	1-554-303-21	SWITCH, TACTILE (▶▶)	
S406	1-572-269-11	SWITCH, SLIDE (DOLBY NR)	
S407	1-572-268-11	SWITCH, SLIDE (DIRECTION MODE)	
*****			
*	1-646-888-11	TC PANEL (B) BOARD	
*****			
< CONNECTOR >			
CN452	1-568-443-11	SOCKET, CONNECTOR 13P	
< DIODE >			
D491	8-719-301-37	LED SEL2210S-CD	
D492	8-719-301-49	LED SEL2810A	
D493	8-719-313-65	DIODE SEL2410E-TH10	
D494	8-719-301-49	LED SEL2810A	
D495	8-719-301-49	LED SEL2810A	
D496	8-719-301-37	LED SEL2210S-CD (D309)	
D497	8-719-301-37	LED SEL2210S-CD	
D498	8-719-301-37	LED SEL2210S-CD	
< RESISTOR >			
R490	1-249-407-11	CARBON 150 5% 1/4W F	
R491	1-249-409-11	CARBON 220 5% 1/4W F	
R492	1-249-411-11	CARBON 330 5% 1/4W	
R493	1-249-413-11	CARBON 470 5% 1/4W F	
R494	1-249-411-11	CARBON 330 5% 1/4W	
R495	1-249-413-11	CARBON 470 5% 1/4W F	
R496	1-249-415-11	CARBON 680 5% 1/4W F	
R497	1-249-417-11	CARBON 1K 5% 1/4W F	

Ref. No.	Part No.	Description	Remark
R498	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R499	1-249-424-11	CARBON 3.9K 5% 1/4W F	
< SWITCH >			
S451	1-554-303-21	SWITCH, TACTILE (STOP)	
S452	1-554-303-21	SWITCH, TACTILE (PAUSE)	
S453	1-554-303-21	SWITCH, TACTILE (▶)	
S454	1-554-303-21	SWITCH, TACTILE (◀)	
S455	1-554-303-21	SWITCH, TACTILE (REC MUTE)	
S456	1-554-303-21	SWITCH, TACTILE (◀◀)	
S457	1-554-303-21	SWITCH, TACTILE (▶▶)	
S458	1-554-303-21	SWITCH, TACTILE (REC)	
S459	1-554-303-21	SWITCH, TACTILE (DUBBING SPEED HIGH)	
S460	1-554-303-21	SWITCH, TACTILE (DUBBING SPEED NORMAL)	
S461	1-554-303-21	SWITCH, TACTILE (D309) (CD SYNCHRO)	
*****			
MISCELLANEOUS			
*****			
1-575-001-11 WIRE, FLAT TYPE (12 CORE)			
1-638-983-11 PC BOARD, MOTOR FLEXIBLE			
1-696-634-21 WIRE (FLAT TYPE) (22 CORE)			
△	8-848-144-11	DEVICE, OPTICAL KSS-240A	
56	1-751-209-11	WIRE (FLAT TYPE) (9 CORE)	
64	1-590-574-11	WIRE, FLAT TYPE (7 CORE)	
65	1-590-485-11	WIRE, FLAT TYPE (7 CORE)	
69	1-690-729-11	WIRE, FLAT TYPE (27 CORE)	
71	1-690-589-31	WIRE, FLAT TYPE (13 CORE) (D309:AUS)	
71	1-751-210-11	WIRE (FLAT TYPE) (13 CORE) (D209/D309: AEP, UK, E, G, IT, EE, EA, MY, SP, CIS)	
* 161	1-452-538-11	MAGNET	
HP901	A-2003-838-A	DECK ASSY, HEAD (DECK A)	
HRPE901A	2004-190-A	DECK ASSY, HEAD (DECK B)	
IC302	8-759-604-95	IC M5F79M07	
M101	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
M901	X-3359-417-1	MOTOR ASSY (CAPSTAN)	
M902	X-3363-501-1	MOTOR ASSY (REEL)	
Q302	8-729-209-15	TRANSISTOR 2SD2012	
*****			
ACCESSORIES & PACKING MATERIALS			
*****			
* 10	3-703-713-41	STICKER, SONY SYMBOL (10) (D209:AUS/D309:UK, AUS)	
* 5	4-941-548-01	LABEL, CLASS 1	
*	4-957-503-01	INDIVIDUAL CARTON (D209:AEP, IT)	
*	4-958-606-01	CUSHION (D209:AEP, IT)	
*****			

Ref. No.	Part No.	Description	Remark
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\*\*\*\*\*  
**HARDWARE LIST**  
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#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-621-775-10	SCREW +B 2. 6X4	
#6	7-621-255-15	SCREW +P 2X3	
#7	7-621-775-00	SCREW +B 2. 6X3	
#8	7-627-556-08	SCREW +P 2. 6X2. 8	



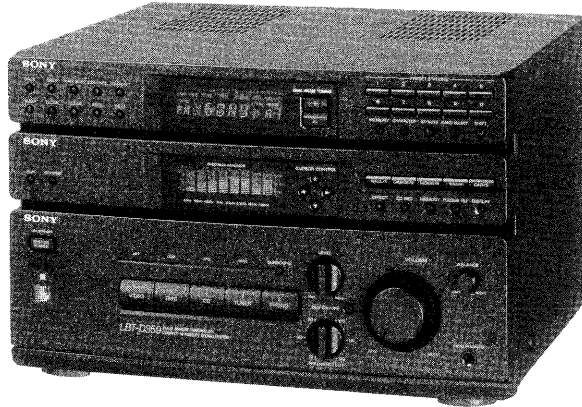
# STR-A37/D309/D359

## SERVICE MANUAL

*AEP Model*  
STR-D309/D359

*UK Model*  
STR-D359

*Australian Model*  
*E Model*  
*PX Model*  
STR-A37



This set is the tuner and amplifier section in

STR-A37 : LBT-A37CDM  
STR-D309 : LBT-D309CD  
STR-D359 : LBT-D359CD

Photo is STR-D359

### SPECIFICATIONS

#### • STR-A37

##### Tuner

System	FM stereo FM/AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 to 108 MHz
Antenna	75 ohms unbalanced 300 ohms balanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	531 to 1,602 kHz (at 9 kHz step) 530 to 1,710 kHz (at 10 kHz step)
Antenna	AM loop antenna External antenna terminal
Intermediate frequency	450 kHz

##### Amplifier

Peak music power output	700 W (6 ohms, 4 speakers driven)
Continuous RMS power output	55 W + 55 W (6 ohms, at 1 kHz, 5% THD)

Input	Jack type	Sensitivity	Impedance
VIDEO IN	Phono	300 mV	47 kohms
PHONO IN	Phono	3 mV	47 kohms
MIC	Phone	1 mV	10 kilohms

Output	Jack type	Impedance
SURROUND SPEAKER	Phono	Accepts speakers of 8 – 16 ohms
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more

Frequency response VIDEO: 15 Hz to 50 kHz  $\begin{smallmatrix} +0 \\ -3 \end{smallmatrix}$  dB

#### General

Power requirements	110 – 120 V/220 – 240 V AC, adjustable with the VOLTAGE SELECTOR, 50/60 Hz
Power consumption	155 W
Mass	Approx. 7.3 kg
Dimensions	Approx. 355 × 225 × 330 mm (w/h/d, including projections)

#### • STR-D309/D359

##### Tuner

System	FM stereo FM/AM superheterodyne tuner
FM tuner section	65.0 to 74.0 MHz (East European model)
Tuning range	87.5 to 108 MHz
Antenna	75 ohms unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	(German model) 531 to 1,602 kHz (Italian model) 522 to 1,611 kHz (Other models) MW: 531 to 1,602 kHz LW: 153 to 279 kHz
Antenna	AM loop antenna External antenna terminal
Intermediate frequency	450 kHz

— Continued on next page —

STEREO FM-AM RECEIVER  
**SONY**<sup>®</sup>



## Amplifier

DIN power output 50 W + 50 W (6 ohms, at 1 kHz)  
 Continuous RMS power output 60 W + 60 W (6 ohms, at 1 kHz, 5% THD)  
 Music power output 90 W + 90 W (6 ohms)

Input	Jack type	Sensitivity	Impedance
VIDEO IN	Phono	300 mV	47 kohms
PHONO IN	Phono	3 mV	47 kohms

Output	Jack type	Impedance
SURROUND SPEAKER	Phono	Accepts speakers of 16 ohms
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more

Frequency response VIDEO: 15 Hz to 50 kHz  $^{+0}_{-3}$  dB

Power requirements 220 – 230 V AC, 50/60 Hz

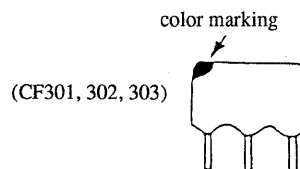
Power consumption 150 W

Mass Approx. 7.3 kg

Dimensions Approx. 355 × 225 × 330 mm  
 (w/h/d, including projections)

## Note on Ceramic Filter (CF301, ▲302, 303) Replacement. (PANEL BOARD : D609, D610)

This set employs two ceramic filters (CF301, ▲302, 303) which should have the same color marking to identify their center frequency. therefore FM IF offset adjustment by (\*A, \*B) connection is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



▲CF302 : G, IT model

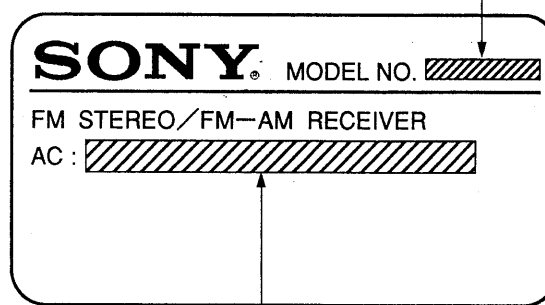
○ : short

X : open

Ceramic filter		Connection		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	*A (D610)	*B (D609)	
White	10.750	X	○	10.750
Red	10.700	X	X	10.700
Black	10.650	○	X	10.650

## MODEL IDENTIFICATION

— Model Number Portion — STR-A37, D309, D359



AEP, G, IT, EE, CIS Model: 220-230V~50/60Hz 150W

UK Model: 240V~50Hz

E, AUS, PX Model: 110-120V/220-240V~50/60Hz 155W

## Note:



G model : Germany model

IT model : Italian model

EE model : East European model

AUS model : Australian model

## SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.



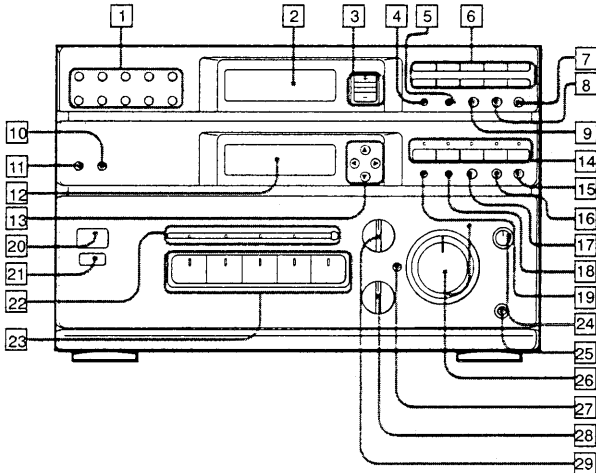
## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
<b>SECTION 1 GENERAL</b>		
	Location of Controls .....	4
<b>SECTION 2. ADJUSTMENTS .....</b>		
5		
<b>SECTION 3. DIAGRAMS</b>		
3-1.	Circuit Boards Location .....	6
3-2.	Block Diagram .....	7
3-3.	Schematic Diagram	
	• TUNER Section	
	(STR-D309 : AEP, EE, CIS) (STR-D359 : AEP, UK) .....	11
3-4.	Printed Wiring Board	
	• TUNER Section	
	(STR-D309 : AEP, EE, CIS) (STR-D359 : AEP, UK) .....	13
3-5.	Schematic Diagram	
	• TUNER Section (STR-D309 : G, IT) (STR-D359 : IT) .....	15
3-6.	Printed Wiring Board	
	• TUNER Section (STR-D309 : G, IT) (STR-D359 : IT) .....	17
3-7.	Schematic Diagram	
	• TUNER Section (STR-A37) .....	19
3-8.	Printed Wiring Board	
	• TUNER Section (STR-A37) .....	21
3-9.	Printed Wiring Board	
	• MAIN Section (STR-D309/D359) .....	23
3-10.	Schematic Diagram	
	• MAIN Section (STR-D309/D359) .....	27
3-11.	Schematic Diagram	
	• MAIN Section (STR-A37) .....	32
3-12.	Printed Wiring Board	
	• MAIN Section (STR-A37) .....	37
3-13.	Semiconductor Lead Layouts .....	41
3-14.	IC Block Diagrams .....	42
<b>SECTION 4. EXPLODED VIEWS</b>		
4-1.	Chassis Section .....	44
4-2.	Cabinet Section .....	45
<b>SECTION 5. ELECTRICAL PARTS LIST .....</b>		
47		

# SECTION 1 GENERAL

## LOCATION OF CONTROLS

### (STR-D309/D359)



#### Tuner

- 1 Buttons for setting the clock and timer
- 2 Display window
- 3 DUAL MODE TUNING + / - buttons
- 4 MEMORY button
- 5 CHARACTER button
- 6 Numeric buttons
- 7 SHIFT button
- 8 BAND SELECT button
- 9 ST/MUTE button

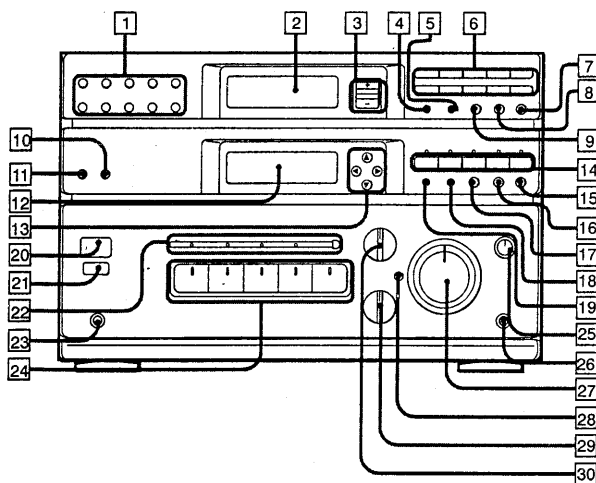
#### Graphic Equalizer

- 10 REVERSE button
- 11 FLAT button
- 12 Display window
- 13 CURSOR CONTROL buttons
- 14 Preset/numeric buttons and indicators
- 15 DISPLAY button
- 16 PERSONAL FILE button and indicator
- 17 MEMORY button and indicator
- 18 EQ REC (equalizer recording) button and indicator
- 19 EFFECT button and indicator

#### Amplifier

- 20 SYSTEM POWER button
- 21 Remote control sensor
- 22 SURROUND button and indicator
- 23 Function selectors and indicators (VIDEO/TAPE/CD/TUNER/PHONO)
- 24 BALANCE control
- 25 HEADPHONES jack
- 26 VOLUME control and indicator
- 27 DBS ON/OFF (Dynamic Bass System) button and indicator
- 28 DBS FREQUENCY control
- 29 DBS LEVEL control

### (STR-A37)



#### Tuner

- 1 Buttons for setting the clock and timer
- 2 Display window
- 3 DUAL MODE TUNING + / - buttons
- 4 MEMORY button
- 5 CHARACTER button
- 6 Numeric buttons
- 7 SHIFT button
- 8 BAND SELECT button
- 9 ST/MUTE button

#### Graphic Equalizer

- 10 REVERSE button
- 11 FLAT button
- 12 Display window
- 13 CURSOR CONTROL buttons
- 14 Preset/numeric buttons and indicators
- 15 DISPLAY button
- 16 PERSONAL FILE button and indicator
- 17 MEMORY button and indicator
- 18 EQ REC (equalizer recording) button and indicator
- 19 EFFECT button and indicator

#### Amplifier

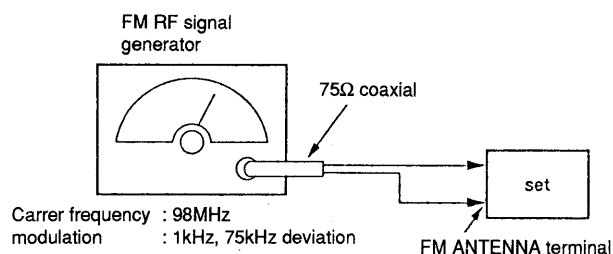
- 20 SYSTEM POWER button
- 21 Remote control sensor
- 22 SURROUND button and indicator
- 23 MICROPHONE jacks
- 24 Function selectors and indicators (VIDEO/TAPE/CD/TUNER/PHONO)
- 25 BALANCE control
- 26 HEADPHONES jack
- 27 VOLUME control and indicator
- 28 DBS ON/OFF (Dynamic Bass System) button and indicator
- 29 DBS FREQUENCY control
- 30 DBS LEVEL control

## SECTION 2 ADJUSTMENTS

**Note:** As a front-end (FE301) is difficult to repair if faulty, replace it with new one.

### FM SECTION

Setting:



#### TUNER OUT CHECK POINT

SPEAKER out receive 98MHz (EXCEPT EE), 70MHz (EE) 60dB  $\mu$  (1mV) and set the Speaker out to 10dBs by VOLUME.

Speaker load: 6 $\Omega$  both CH

#### FM NULL Adjustment

Procedure:

1. Supply a 60dB  $\mu$  (1mV) 98MHz (EXCEPT EE), 70MHz (EE) signal from the ANTENNA terminal.
2. Tune the set to 98MHz. (EXCEPT EE), 70MHz (EE)
3. Adjust T301 for 0V reading on the measurement point.

#### FM Tuned Level Adjustment

Band: FM

ST/MUTE SW: OFF

Procedure:

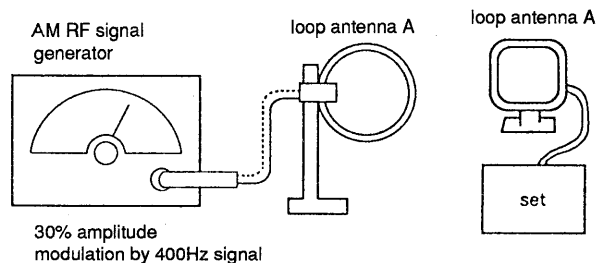
1. Supply a 20 $\pm$ 4dB $\mu$  (EE), 25 $\pm$ 4dB $\mu$  (EXCEPT EE) 98MHz (EXCEPT EE), 70MHz (EE) signal from the ANTENNA terminal.
2. Tune the set to 98MHz. (EXCEPT EE), 70MHz (EE)
3. Adjust RV302 so that the Voltage of IC301 ② pin is set to low.

Adjustment Location: ST MAIN BOARD

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by trimmer capacitors.

### AM SECTION

Setting:



#### AM Tuned Level Adjustment

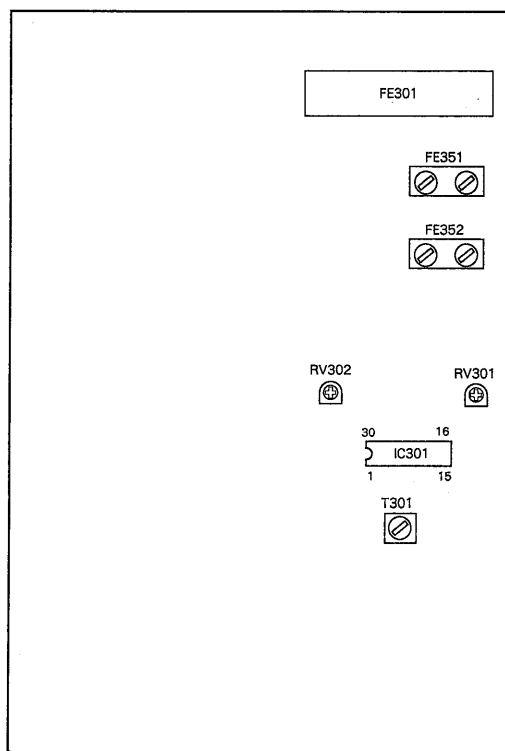
Band: AM

Procedure:

1. Set loop antenna input level to 94dB $\mu$ /m, 1050kHz and no signal tuned light should not on.
2. Tune the set to 1050kHz
3. Adjust RV301 so that the Voltage of IC301 ② pin is set to low.

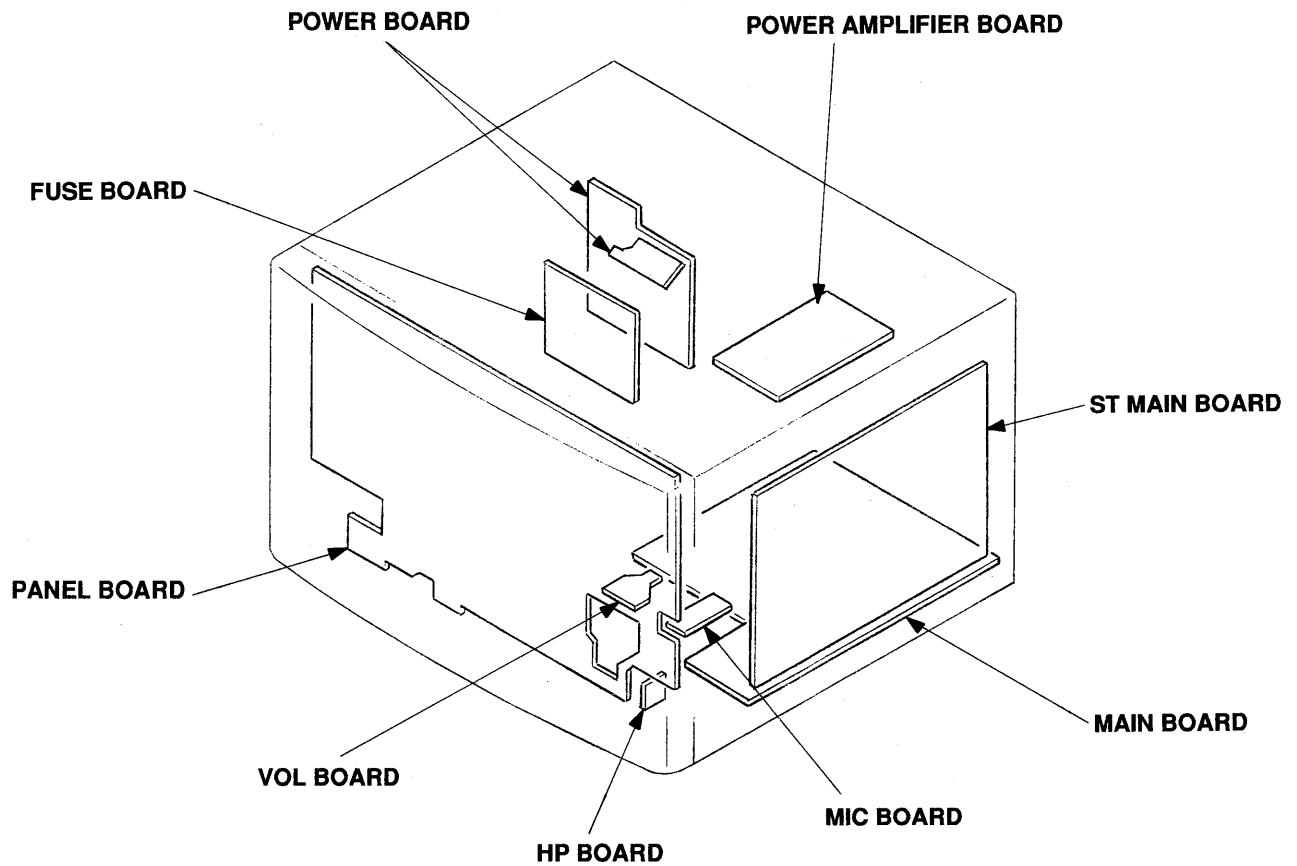
Adjustment Location: tuner board

[ST MAIN BOARD] (component side)



## SECTION 3 DIAGRAMS

### 3-1. CIRCUIT BOARDS LOCATION








— 8 —





Ref. No.	Location
D351	D-3
D391	I-4
D392	H-4
IC201	C-7
IC202	E-7
IC251	F-7
IC301	F-3
IC501	D-5
Q303	D-4
Q304	D-4
Q305	H-4
Q306	H-4
Q307	G-5
Q308	H-5
Q309	H-5
Q351	C-3
Q352	C-4
Q353	D-4
Q354	E-3
Q355	D-2
Q356	D-3
Q501	E-2
Q502	E-3
Q521	B-6
Q522	A-6
Q531	C-6
Q532	B-6

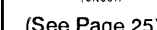
**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

-  : B+ Line
-  : B- Line
-  : adjustment for repair.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.  
no mark: FM  
( ) : AM
- Voltages are taken with a VOM (Input Impedance 10 MΩ).  
Voltage variations may be noted due to normal production tolerances.
- Signal path.  
 : FM  
 : AM

**Note:**

- ◻ : indicates side identified with part number.
- △ : internal component.
- : parts extracted from the components side.


EE : East European










Ref. No.	Location
IC201	C-7
IC202	E-7
IC251	F-7
IC301	F-3
IC501	D-5
Q303	D-4
Q304	D-4
Q305	H-4
Q306	H-4
Q307	G-5
Q308	H-5
Q309	H-5
Q501	E-2
Q502	E-3
Q521	B-6
Q522	A-6




**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}; \mu\text{F}; 50\text{WV}$  or less are not indicated except for electrolytic and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
-  : nonflammable resistor.
- $\Delta$  : internal component.

**Note:** The components identified by mark  or dotted line with mark  are critical for safety.  
Replace only with part number specified.

-  : B+ Line
-  : B- Line
-  : adjustment for repair.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.  
no mark: FM  
( ): AM
- Voltages are taken with a VOM (Input Impedance 10 M $\Omega$ ).  
Voltage variations may be noted due to normal production tolerances.
- Signal path.  
  - ➡ : FM
  - ➡ : AM

**Note:**

-  : indicates side identified with part number.
-  : internal component.
-  : parts extracted from the components side.





SEMICONDUCTOR LOCATION

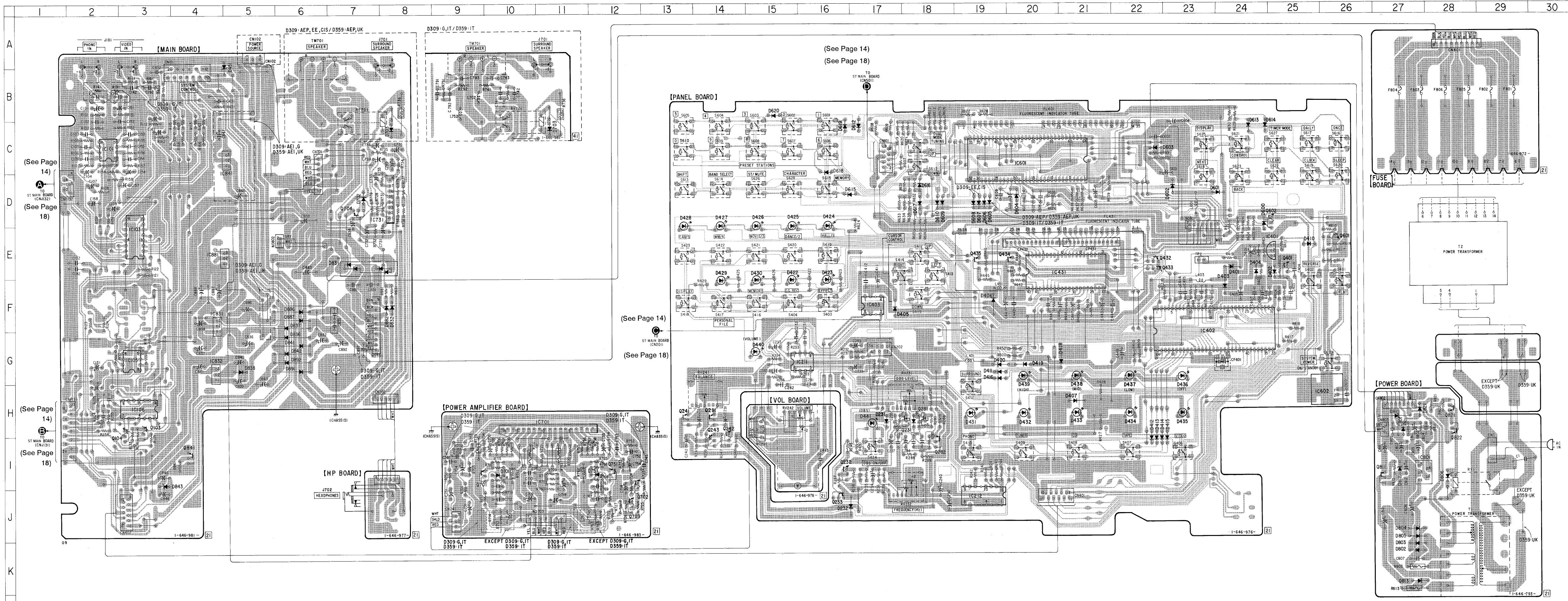
Ref. No.	Location	Ref. No.	Location
D231	H-17	D806	I-28
D232	J-17	D811	H-27
D281	H-18	D812	I-27
D401	E-24	D813	K-27
D402	E-25	D821	H-27
D403	F-24	D831	E-7
D404	E-24	D832	F-8
D405	F-17	D836	G-6
D406	F-19	D837	F-6
D407	H-21	D838	G-5
D410	E-25	D841	G-6
D411	G-19	D842	G-6
D412	I-22	D843	I-3
D413	I-22	D882	F-8
D414	I-22	D886	F-6
D415	I-23	D887	F-6
D416	G-19	D891	G-6
D418	G-21	D892	G-6
D419	G-20		
D420	G-19	IC101	C-2
D422	F-15	IC103	E-3
D423	F-16	IC105	G-3
D424	E-16	IC106	H-3
D425	E-15	IC211	G-16
D426	E-15	IC212	J-19
D427	E-14	IC401	E-25
D428	E-13	IC402	G-23
D429	F-14	IC403	F-17
D430	F-15	IC431	E-21
D431	H-19	IC601	C-20
D432	H-20	IC602	H-26
D433	H-21	IC701	H-11
D434	H-22	IC731	D-8
D435	H-23	IC801	I-27
D436	G-23	IC831	F-4
D437	G-22	IC832	G-4
D438	G-21	IC881	E-4
D439	G-20		
D440	G-15	Q103	H-3
D441	H-17	Q104	H-3
D451	A-5	Q231	H-18
D600	D-24	Q232	I-16
D601	D-24	Q233	J-16
D602	D-23	Q241	H-13
D603	C-22	Q242	I-14
D604	D-20	Q243	I-14
D605	D-19	Q281	H-18
D606	D-19	Q282	I-18
D607	D-19	Q291	H-14
D608	D-19	Q401	E-25
D609	D-18	Q432	E-22
D610	D-18	Q433	E-22
D612	C-17	Q434	E-20
D613	C-24	Q435	E-19
D614	C-24	Q601	E-26
D615	D-17	Q602	D-25
D616	D-18	Q701	I-9
D617	D-18	Q702	I-12
D619	C-16	Q703	J-12
D620	B-15	Q704	D-7
D701	I-10	Q751	I-12
D702	D-7	Q811	I-27
D703	C-8	Q821	H-28
D751	I-12	Q822	H-28
D801	H-27	Q841	I-4
D802	K-27		
D803	K-27		
D804	J-27		
D805	J-27		

Note:

- indicates side identified with part number.
- internal component.
- parts extracted from the components side.
- G : Germany
- IT : Italian
- EE : East European

3-9. PRINTED WIRING BOARD

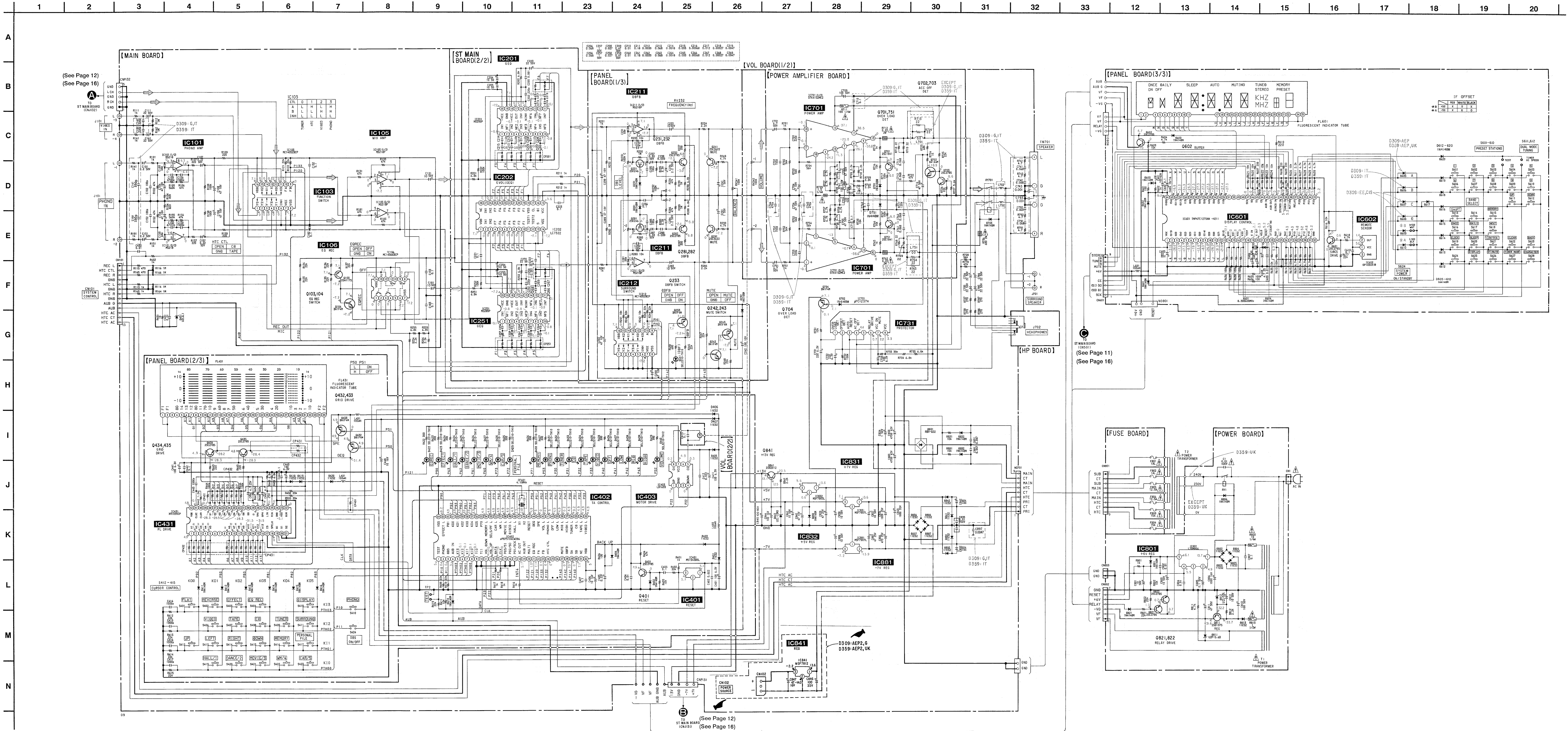
- MAIN SECTION (STR-D309/D359)
- See page 6 for Circuit Boards Location.





3-10. SCHEMATIC DIAGRAM  
• MAIN SECTION (STR-D309/D359)  
• See page 41, 42 and 43 for Semiconductor Lead Layouts and IC Block Diagrams.

REVISED



**Note:**

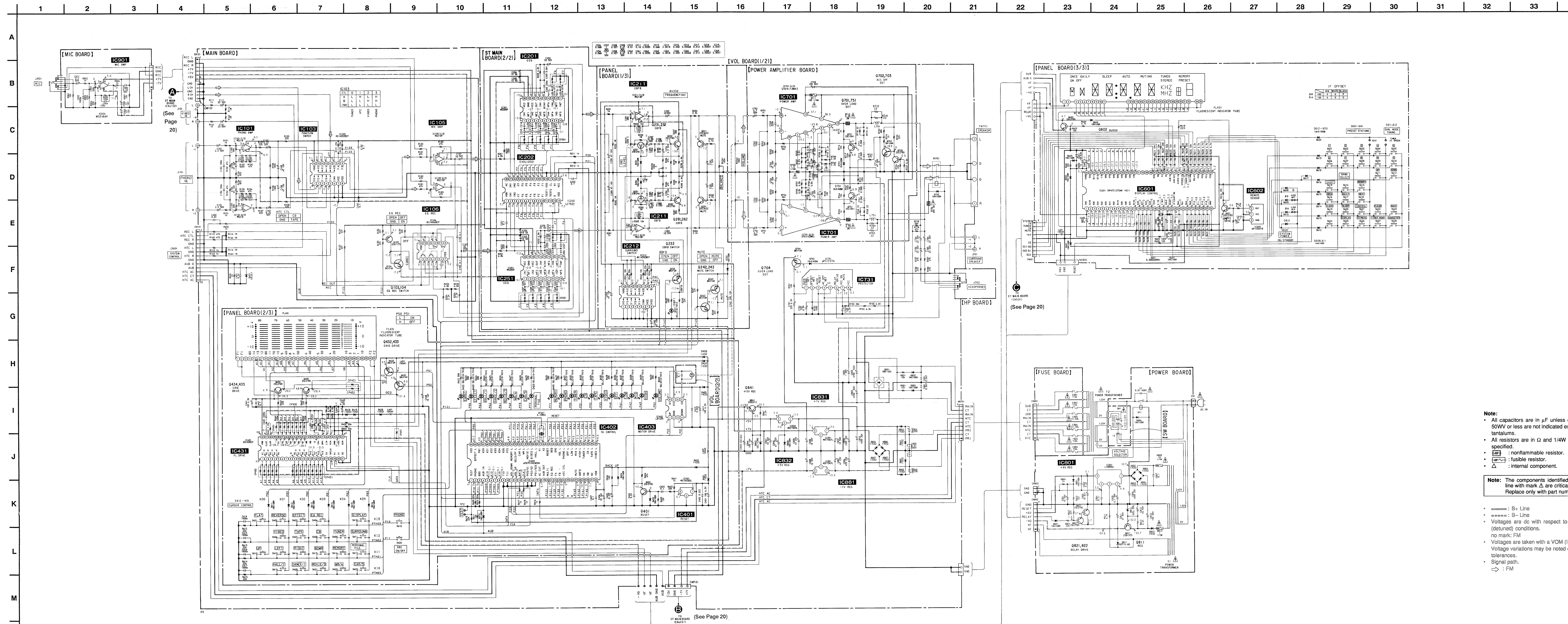
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$   $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.
- $\square$  : nonflammable resistor.
- $\square$  : fusible resistor.
- $\Delta$  : internal component.

**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

• — : B+ Line  
• - - - : B- Line  
• Voltages are dc with respect to ground under no-signal (detuned) conditions.  
no mark: FM  
• Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.  
• Signal path.  
 $\square$  : FM

G : Germany  
IT : Italian  
EE : East European

- **MAIN SECTION (STR-A37)**
- See page 41, 42 and 43 for Semiconductor Lead Layouts and IC Block Diagrams.



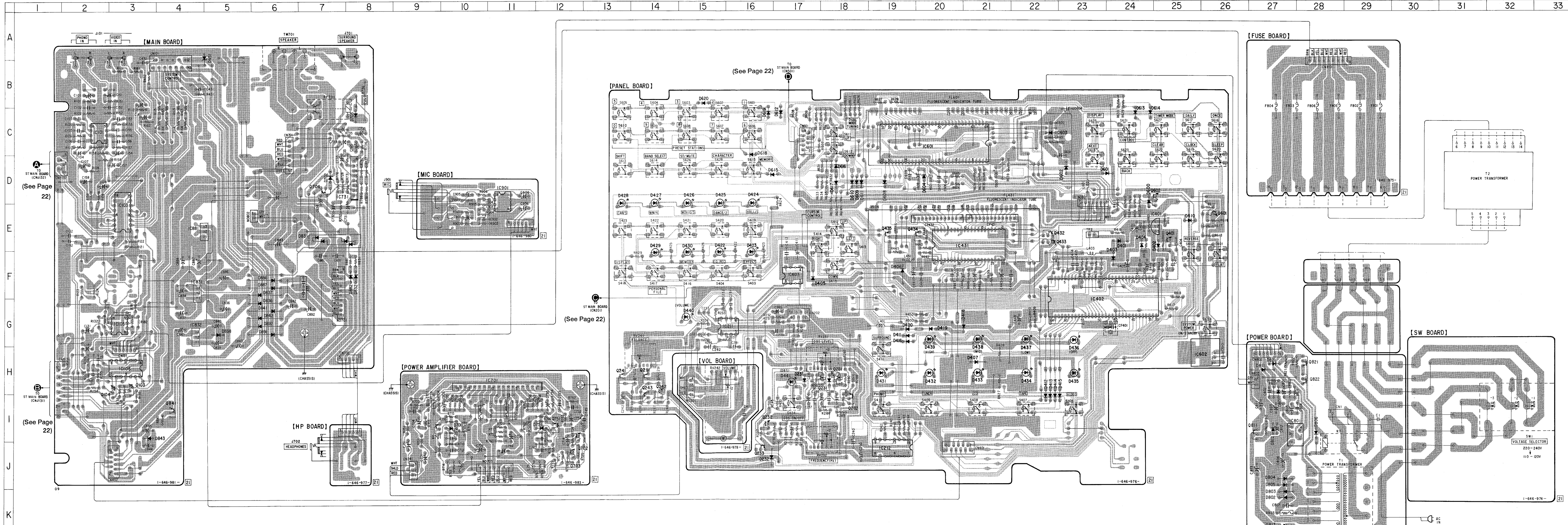


SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D231	H-17	D806	I-28
D232	J-17	D811	H-27
D281	H-18	D812	J-27
D401	E-24	D813	K-27
D402	E-25	D821	H-27
D403	F-24	D831	E-7
D404	E-24	D832	F-8
D405	F-17	D836	G-6
D406	F-19	D837	F-6
D407	H-21	D838	G-5
D410	E-25	D841	G-6
D411	G-19	D842	G-6
D412	I-22	D843	I-3
D413	I-22	D882	F-8
D414	I-22	D886	F-6
D415	I-23	D887	F-6
D416	G-19		
D418	G-21	IC101	C-2
D419	G-20	IC103	E-3
D420	G-19	IC105	G-3
D422	F-15	IC106	H-3
D423	F-16	IC211	G-16
D424	E-16	IC212	J-19
D425	E-15	IC401	E-25
D426	E-15	IC402	G-23
D427	E-14	IC403	F-17
D428	E-13	IC431	E-21
D429	F-14	IC601	C-20
D430	F-15	IC602	H-26
D431	H-19	IC701	H-11
D432	H-20	IC731	D-8
D433	H-21	IC801	I-28
D434	H-22	IC831	A-4
D435	H-23	IC832	G-4
D436	G-23	IC881	E-4
D437	G-22	IC901	D-11
D438	G-21		
D439	G-20	Q103	H-3
D440	G-15	Q104	H-3
D441	H-17	Q231	H-18
D451	A-5	Q232	I-16
D600	D-24	Q233	J-16
D601	D-24	Q241	H-13
D602	D-23	Q242	I-14
D603	C-22	Q243	I-14
D604	D-20	Q281	H-18
D608	D-19	Q282	I-18
D609	D-18	Q291	H-14
D610	D-18	Q401	E-25
D611	D-18	Q432	E-22
D612	C-17	Q433	E-22
D613	C-24	Q434	E-20
D614	C-24	Q435	E-19
D615	D-17	Q601	E-26
D616	D-18	Q602	D-25
D617	D-18	Q701	I-9
D619	C-16	Q702	I-12
D620	B-15	Q703	J-12
D701	I-10	Q704	D-7
D702	D-7	Q751	I-12
D703	C-8	Q811	I-27
D751	I-12	Q821	H-28
D801	H-27	Q822	H-28
D802	K-27	Q841	I-4
D803	K-27		
D804	J-27		
D805	J-27		

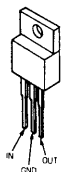
3-12. PRINTED WIRING BOARD  
• MAIN SECTION (STR-A37)  
• See page 6 for Circuit Boards Location.

Note:  
• [Symbol] indicates side identified with part number.  
• Δ internal component.  
• ○ parts extracted from the components side.

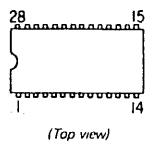


### 3-13. SEMICONDUCTOR LEAD LAYOUTS

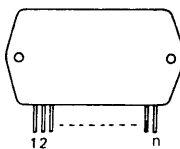
AN6291  
M5F78M05L  
M5F78M07L



LC7522  
LC7522K



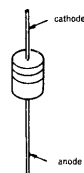
STK-4152MK2K  
STK-4172MK2K



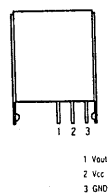
2SC1841-PAFAEA  
2SC3112-B



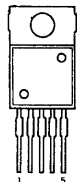
HZS6A1L  
UZL-33L  
11ES2



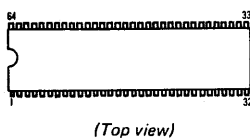
GP1U50XB



L78MR06



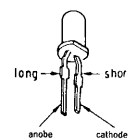
TMP47C1270AN-H211  
uPD75104CW-286



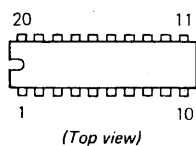
2SC2603-EF  
2SC2669-0Y  
2SC3622A-LK  
DTA114ES  
DTC114ES  
DTC124ES



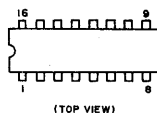
SEL2210S-CD  
SEL3210S-CD



IR3R42  
M5289P



MC14052BCP  
MC14053BCP



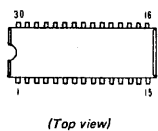
uPC1237HA



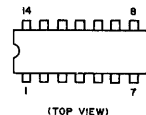
2SK246-GR3  
2SK246-Y



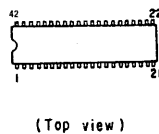
LA1851N



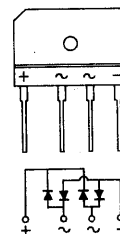
MC14066BCP



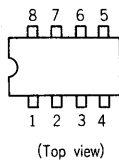
XR-1095



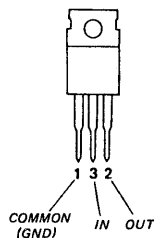
RBV-602-01



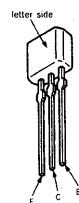
LB1639  
M5218AP



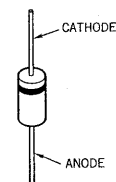
M5F79M07L



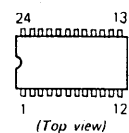
DTA124ES  
2SA1175-HFE  
2SC2785-HFE



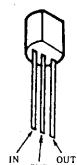
1N4148M  
UZL-12M3  
UZP-5.6B



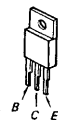
LC7218



M51943BSL

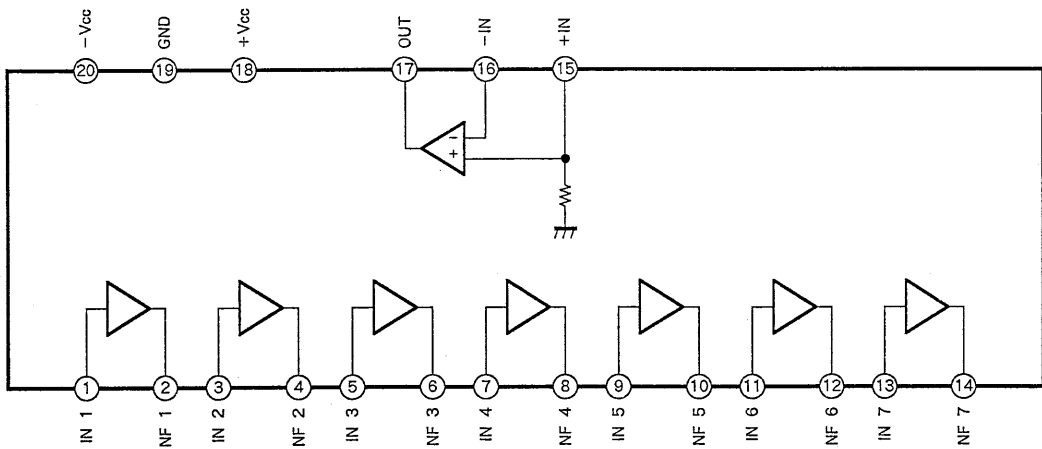


2SB1094-LK  
2SD2012

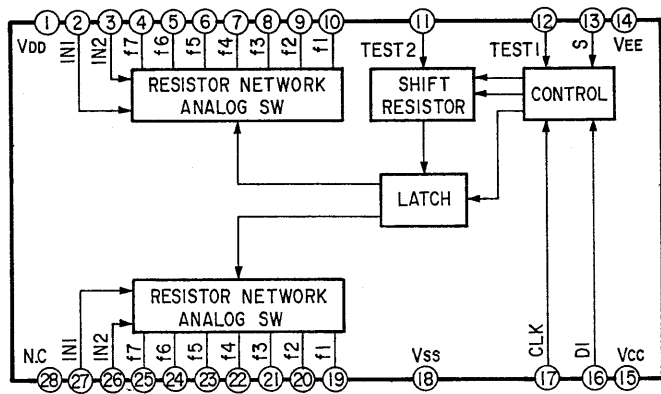


3-14. IC BLOCK DIAGRAMS

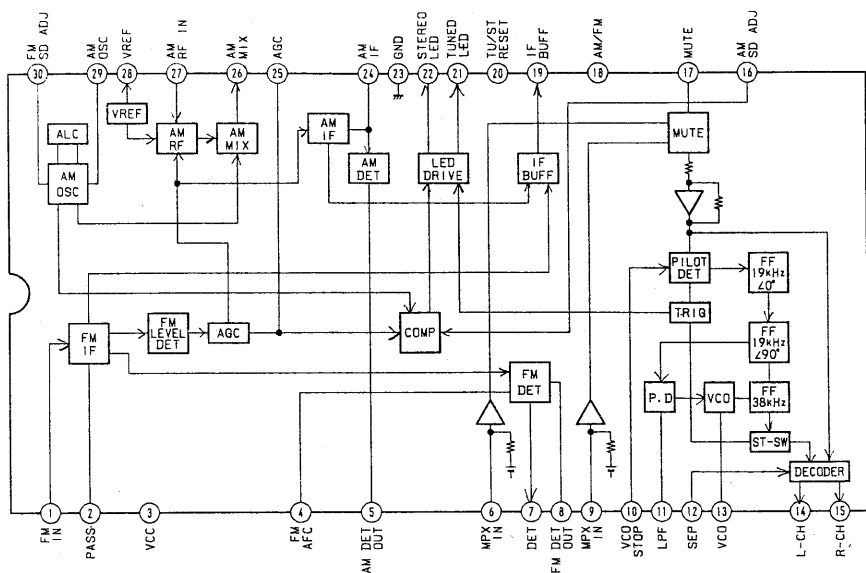
• IC201, 251 M5289P



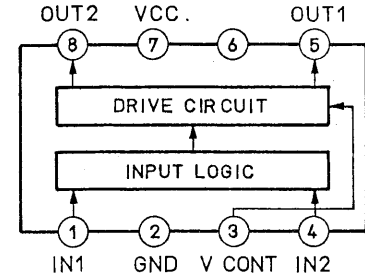
• IC202 LC7522



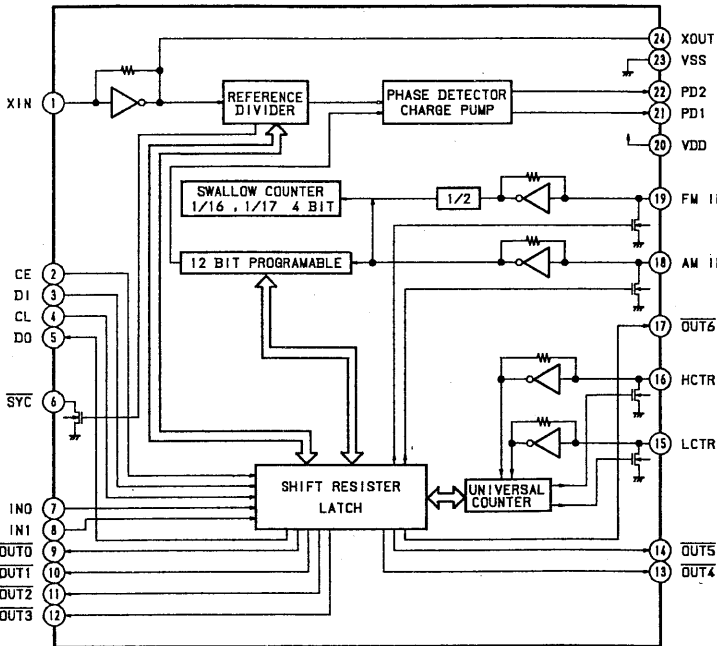
• IC301 LA1851N



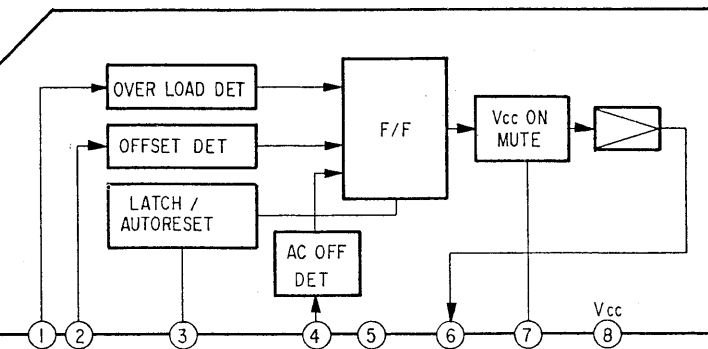
• IC403 LB1639



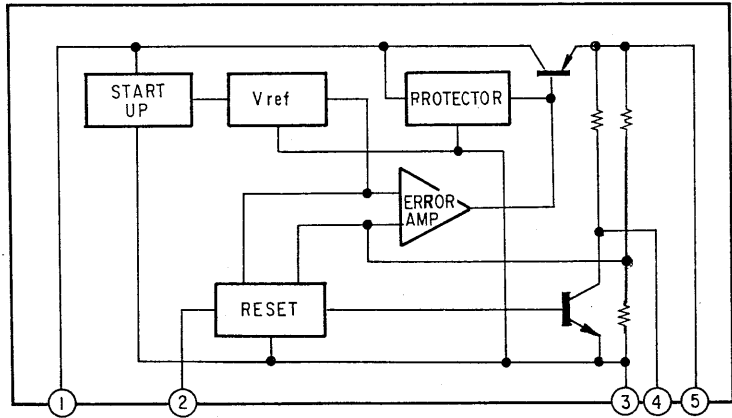
• IC501 LC7218



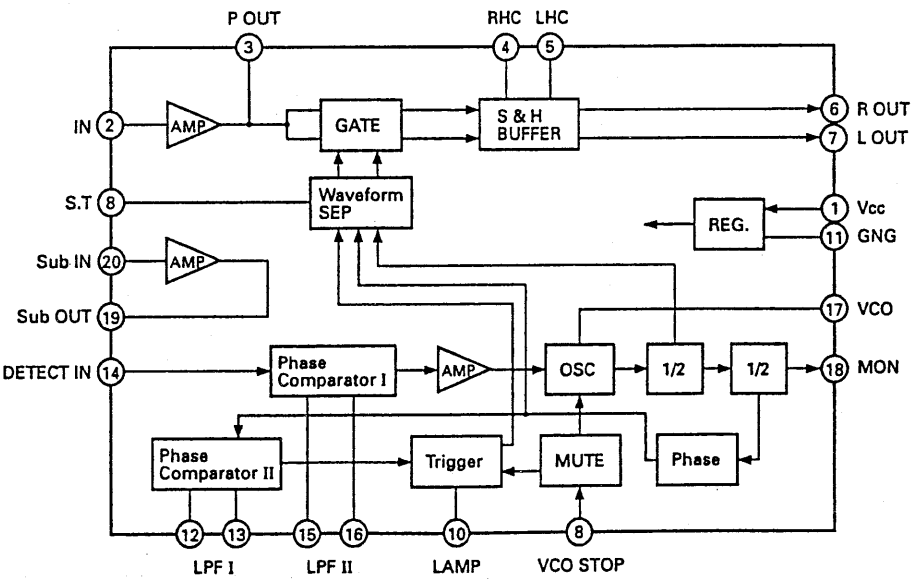
• IC731 uPC1237HA



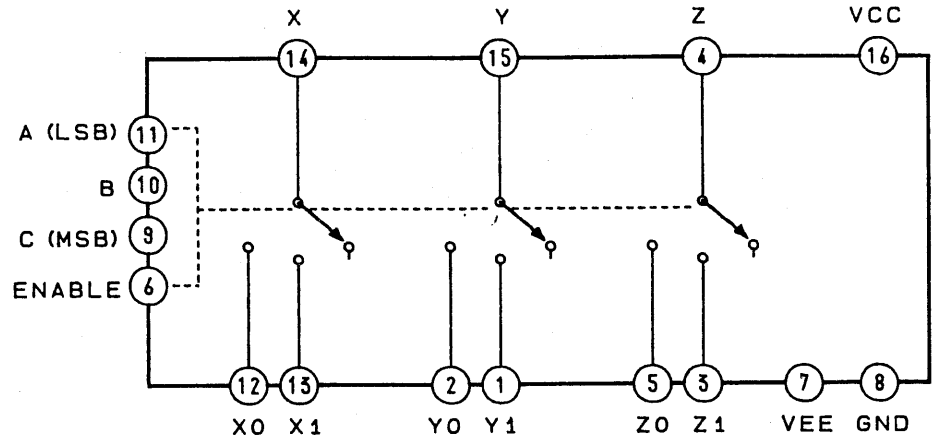
• IC801 L78MR06



• IC1701 IR3R42



• IC1703 MC14053BCP





## EXPLODED VIEWS

NOTE:



- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked “ \* ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Color Indication of Appearance Parts  
Example:  
KNOB, BALANCE (WHITE) . . . (RED)  

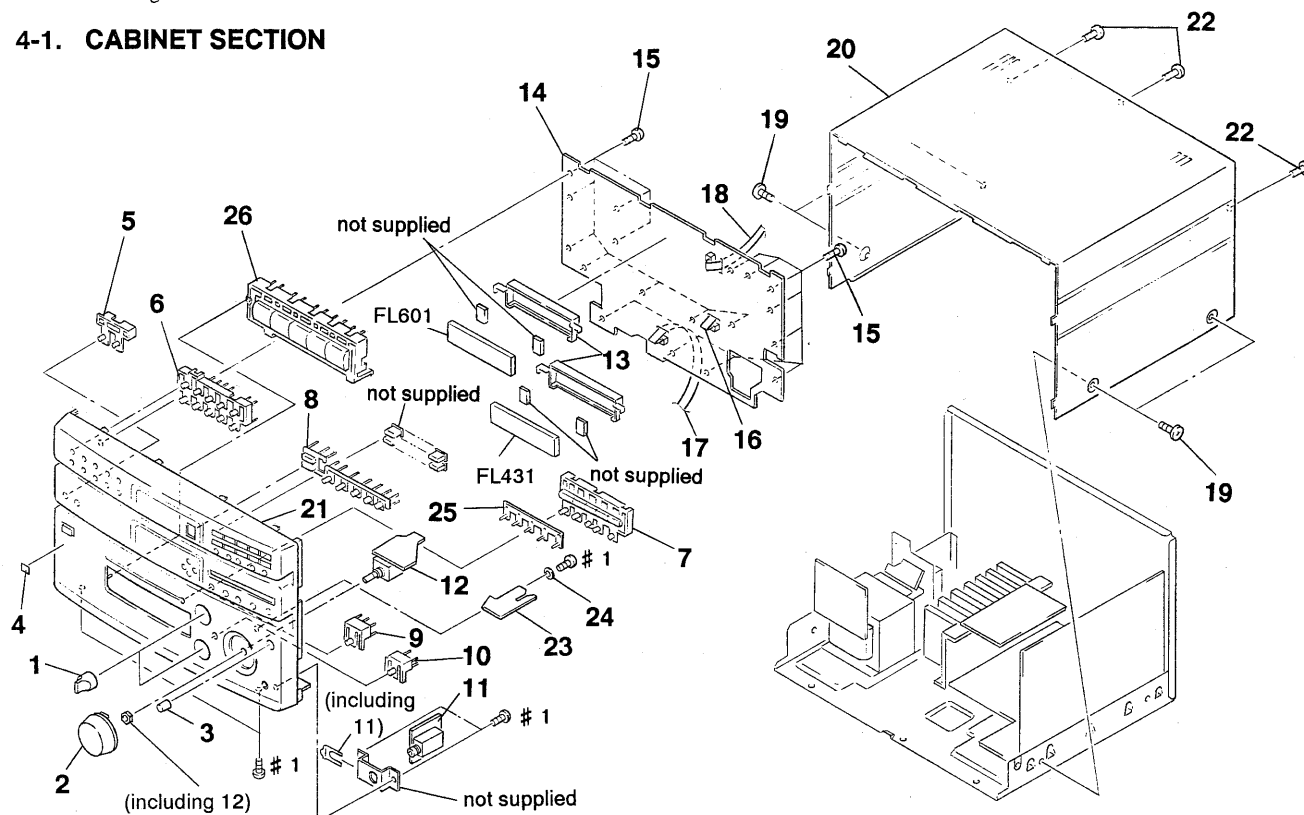
↑  
Parts color

↑  
Cabinet's color
- Hardware (# mark) list is given in the last of this parts list.

- G : Germany model
- IT : Italian model
- AUS : Australian model
- EE : East European model

The components identified by mark  or dotted line with mark  are critical for safety.  
Replace only with part number specified.

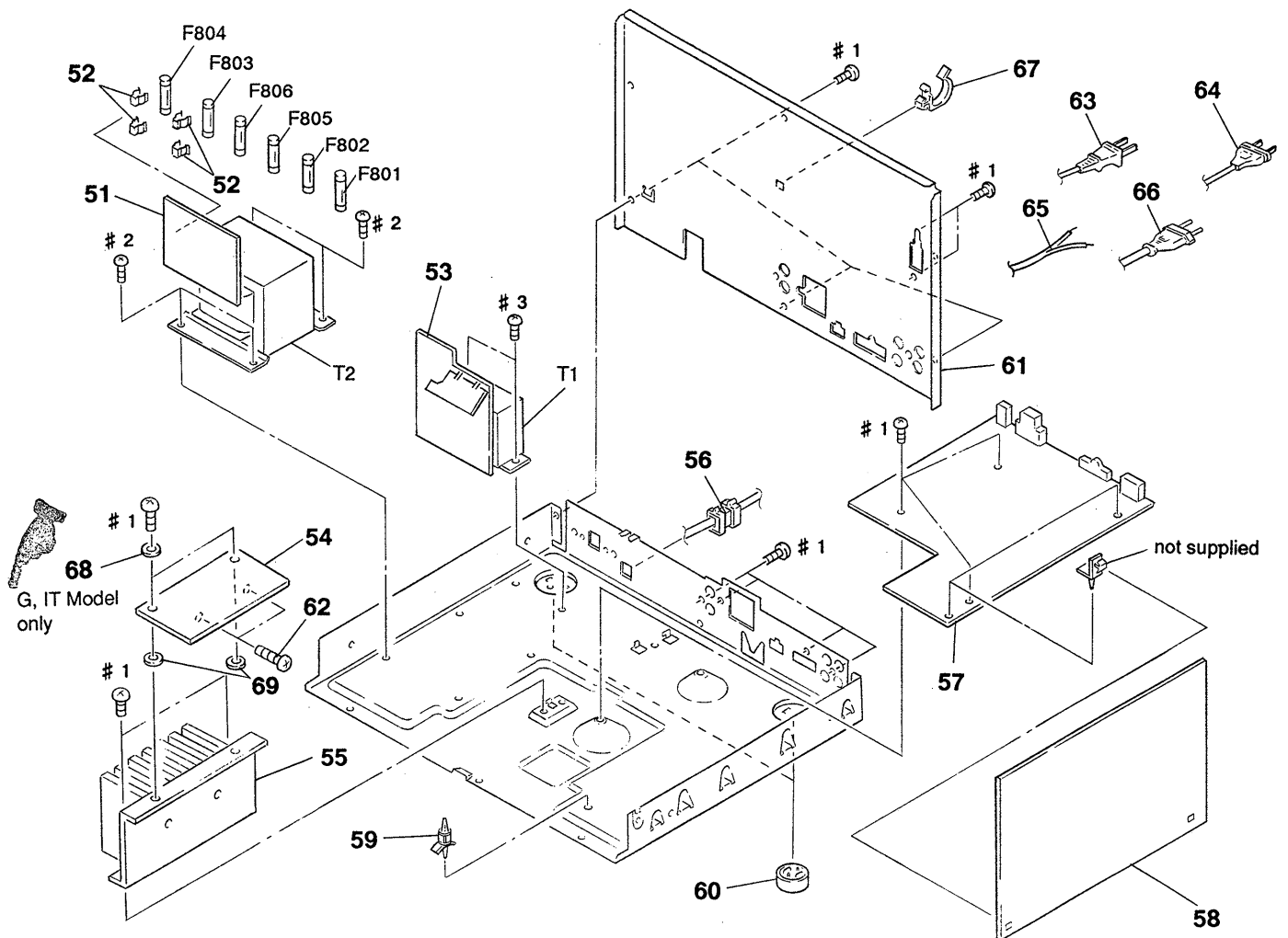
#### 4-1. CABINET SECTION



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
1	4-955-636-01	KNOB (DB) (D309)		* 14	A-4360-500-A	PANEL BOARD, COMPLETE (D359:IT)	
	4-955-636-22	KNOB (DB) (A37, D359)		*	A-4360-812-A	PANEL BOARD, COMPLETE (D309:EE, CIS)	
2	4-955-635-01	KNOB (V) (D309)		*	A-4360-917-A	PANEL BOARD, COMPLETE (D359:UK)	
	4-955-635-21	KNOB (V) (A37, D359)		15	4-951-620-01	SCREW (2. 6X8). +BVTP	
3	4-955-744-01	KNOB (BA) (D309)		16	1-696-986-31	WIRE (FLAT TYPE) (7 CORE)	
	4-955-744-21	KNOB (BA) (A37, D359)		17	1-575-666-11	WIRE, FLAT TYPE (11 CORE)	
* 4	3-703-713-41	STICKER, SONY SYMBOL (10)		18	1-751-025-11	WIRE (FLAT TYPE) (9 CORE) (A37, D359)	
5	4-955-741-01	BUTTON (PR) (D309)			1-751-025-31	WIRE (FLAT TYPE) (9 CORE) (A37, D309, D359)	
	4-955-741-21	BUTTON (PR) (A37, D359)		19	3-704-366-01	SCREW (CASE) (M3X8)	
6	4-955-765-01	BUTTON (TIMER) (D309)				(A37, D309:AEP, G, IT, EE, CIS, D359)	
7	X-4943-302-1	BUTTON (SELECT 5) ASSY (D309)		* 20	4-955-759-11	CASE (D309)	
	X-4943-304-1	BUTTON (SELECT 5) ASSY (A37, D359)		*	4-955-759-51	CASE (A37, D359)	
8	X-4943-303-1	BUTTON (DBFB) ASSY (A37, D359)		21	X-4943-296-1	PANEL ASSY, FRONT (D309)	
9	4-955-774-01	BUTTON (SURROUND) (D309)			X-4943-299-1	PANEL ASSY, FRONT (D359)	
10	4-955-767-01	BUTTON (EFFECT) (D309)			X-4943-300-1	PANEL ASSY, FRONT (A37)	
				22	3-703-685-21	SCREW (+BV 3X8) (A37, D359)	
* 11	1-646-977-11	HP BOARD (D309)		* 23	1-646-980-21	MIC BOARD (A37)	
*	1-646-977-21	HP BOARD (A37, D359)		24	3-330-034-01	WASHER (A37, D359)	
* 12	1-646-978-11	VOL BOARD (D309)			3-564-542-00	WASHER, FIBER (D309:AEP, G, IT, EE, CIS)	
*	1-646-978-21	VOL BOARD (A37, D359)		25	4-955-771-01	INDICATOR (SELECT 5) (D309)	
* 13	4-942-301-01	HOLDER, FL TUBE		26	X-4943-179-1	BUTTON (FU) ASSY (D309)	
* 14	A-4356-896-A	PANEL BOARD, COMPLETE (D309:AEP)		FL431	1-519-648-21	INDICATOR TUBE, FLUORESCENT	
*	A-4356-977-A	PANEL BOARD, COMPLETE (D359:AEP)		FL601	1-519-711-11	INDICATOR TUBE, FLUORESCENT	
*	A-4356-995-A	PANEL BOARD, COMPLETE (A37:E, AUS, PX)					
*	A-4360-124-A	PANEL BOARD, COMPLETE (D309:G)					
*	A-4360-183-A	PANEL BOARD, COMPLETE (D309:IT)					

REVISED

## 4-2. CHASSIS SECTION





# REVISED

Ref. No.	Part No.	Description	Remark
* 51	1-646-972-11	FUSE BOARD (D309)	
*	1-646-972-21	FUSE BOARD (D359)	
52	1-533-217-31	HOLDER, FUSE (D309)	
*	1-533-213-11	HOLDER, FUSE (A37/D359)	
* 53	A-4356-906-A	POWER BOARD, COMPLETE	
		(D309:AEP, G, IT, EE, CIS)	
*	A-4356-987-A	POWER BOARD, COMPLETE (D359:AEP, IT)	
*	A-4356-993-A	POWER BOARD, COMPLETE (D359:UK)	
*	A-4360-002-A	POWER BOARD, COMPLETE (A37)	
* 54	A-4356-905-A	POWER AMPLIFIER BOARD, COMPLETE	
		(D309:AEP, EE, CIS)	
*	A-4356-986-A	POWER AMPLIFIER BOARD, COMPLETE (D359:AEP)	
*	A-4356-992-A	POWER AMPLIFIER BOARD, COMPLETE (D359:UK)	
*	A-4360-001-A	POWER AMPLIFIER BOARD, COMPLETE (A37)	
*	A-4360-132-A	POWER AMPLIFIER BOARD, COMPLETE	
		(D309:G, IT)	
*	A-4360-506-A	POWER AMPLIFIER BOARD, COMPLETE (D359:IT)	
* 55	4-955-775-01	HEAT SINK (L3-E) (D309:AEP, G, IT, EE, CIS)	
* 56	3-703-244-00	BUSHING (2104), CORD (A37:AUS, D309, D359)	
*	3-703-571-11	BUSHING (S) (4516), CORD (A37:E, PX)	
* 57	A-4356-904-A	MAIN BOARD, COMPLETE (D309:AEP)	
*	A-4356-985-A	MAIN BOARD, COMPLETE (D359:AEP)	
*	A-4356-991-A	MAIN BOARD, COMPLETE (D359:UK)	
*	A-4360-000-A	MAIN BOARD, COMPLETE (A37)	
*	A-4360-131-A	MAIN BOARD, COMPLETE (D309:G)	
*	A-4360-177-A	MAIN BOARD, COMPLETE (D309:AEP, EE, CIS)	
*	A-4360-185-A	MAIN BOARD, COMPLETE (D309:IT)	
*	A-4360-499-A	MAIN BOARD, COMPLETE (D359:AEP)	
*	A-4360-505-A	MAIN BOARD, COMPLETE (D359:IT)	
* 58	A-4356-901-A	ST MAIN BOARD, COMPLETE (D309:AEP)	
*	A-4356-982-A	ST MAIN BOARD, COMPLETE (D359:AEP)	
*	A-4356-989-A	ST MAIN BOARD, COMPLETE (D359:UK)	
*	A-4356-998-A	ST MAIN BOARD, COMPLETE (A37)	
*	A-4360-123-A	ST MAIN BOARD, COMPLETE (D309:G, IT)	
*	A-4360-503-A	ST MAIN BOARD, COMPLETE (D359:IT)	
*	A-4360-814-A	ST MAIN BOARD, COMPLETE (D309:EE)	
*	A-4360-817-A	ST MAIN BOARD, COMPLETE (D309:CIS)	
59	4-943-687-01	HOLDER, PC BOARD	
60	4-933-601-01	FOOT (A37, D359)	
	X-4941-228-1	FOOT ASSY (D309)	
* 61	4-955-769-11	PANEL, BACK (D309:AEP)	
*	4-955-769-21	PANEL, BACK (D309:CIS)	
*	4-955-769-31	PANEL, BACK (D309:IT)	
*	4-955-769-41	PANEL, BACK (D309:G)	
*	4-955-769-51	PANEL, BACK (D309:AEP)	
*	4-955-769-61	PANEL, BACK (D309:AEP)	
*	4-955-769-71	PANEL, BACK (D309:EE)	
*	4-955-828-11	PANEL, BACK (D359:AEP)	
*	4-955-828-21	PANEL, BACK (D359:UK)	
*	4-955-828-31	PANEL, BACK (D359:IT)	
*	4-955-828-51	PANEL, BACK (D359:AEP)	
*	4-955-828-61	PANEL, BACK (A37:E, PX)	
*	4-955-828-71	PANEL, BACK (A37:AUS)	
62	4-928-635-11	SCREW, +BV (2.6X16) TAPPING	
△63	1-575-653-11	CORD, POWER (A37:E, PX)	
△64	1-690-608-11	CORD, POWER (A37:AUS)	
△65	1-696-570-21	CORD, POWER (D359:UK)	
△66	1-575-651-11	CORD, POWER	
		(D309:AEP, G, IT, EE, CIS/D359:AEP, IT)	
67	4-956-370-02	BAND, PLUG FIXED (A37:AUS)	
68	4-960-342-21	WASHER (HEAT SINK) (G, IT)	
69	4-960-342-31	WASHER (HEAT SINK)	
△F801	1-532-078-00	FUSE (1A)	
△F802	1-532-078-00	FUSE (1A)	

Ref. No.	Part No.	Description	Remark
△F803	1-532-299-00	FUSE (5A)	
△F804	1-532-299-00	FUSE (5A)	
△F805	1-532-286-00	FUSE (2.5A)	
△F806	1-532-286-00	FUSE (2.5A)	
△T1	1-423-646-21	TRANSFORMER, POWER (D359)	
△	1-423-646-31	TRANSFORMER, POWER (D309)	
△	1-423-647-21	TRANSFORMER, POWER (A37)	
△T2	1-423-499-11	TRANSFORMER, POWER (D309)	
△	1-423-499-21	TRANSFORMER, POWER (D359)	
△	1-423-500-21	TRANSFORMER, POWER (A37)	



The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

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## SECTION 5 ELECTRICAL PARTS LIST

**FUSE** **HP** **MAIN**

### NOTE:

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F : nonflammable
- Color Indication of Appearance Parts Example:  
KNOB, BALANCE (WHITE) . . . (RED)  

↑  
Parts color
↑  
Cabinet's color
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

### • SEMICONDUCTORS

In each case, u:  $\mu$ , for example:

uA...:  $\mu$  A..., uPA...:  $\mu$  PA...,  
uPB...:  $\mu$  PB..., uPC...:  $\mu$  PC...,  
uPD...:  $\mu$  PD...

### • CAPACITORS

uF :  $\mu$  F

### • COILS

uH :  $\mu$  H

- Hardware (# mark) list is given in the last of this parts list.

- G : Germany model
- IT : Italian model
- EE : East European model
- CIS : Common Independent States model
- AUS: Australian model

AEP1: AEP with out POWER SOURCE

AEP2: AEP with POWER SOURCE

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	remark
*	1-646-972-11	FUSE BOARD (D309) *****		< CAPACITOR >			
*	1-646-972-21	FUSE BOARD (D359) *****		C101	1-124-925-11	ELECT 2. 2uF 20% 100V	
*	1-646-975-21	FUSE BOARD (A37) *****		C102	1-164-073-11	CERAMIC 100PF 10% 50V	
< CONNECTOR >				C103	1-164-066-11	CERAMIC 68PF 5% 50V	
* CN801	1-564-512-11	PLUG, CONNECTOR 9P		C104	1-124-126-00	ELECT 47uF 20% 10V	
*****				C105	1-161-377-00	CERAMIC 0. 0047uF 30% 16V	
*	1-646-977-11	HP BOARD (D309) *****		C106	1-161-374-11	CERAMIC 0. 0015uF 20% 50V	
*	1-646-977-21	HP BOARD (A37/D359) *****		C107	1-124-464-11	ELECT 0. 22uF 20% 50V	
< JACK >				C108	1-124-126-00	ELECT 47uF 20% 10V	
* J702	1-691-003-11	JACK, LARGE TYPE (HEADPHONES)		C111	1-124-916-11	ELECT 22uF 20% 63V	
*****				C131	1-124-907-11	ELECT 10uF 20% 50V	
*	A-4356-904-A	MAIN BOARD, COMPLETE (D309:AEP2) *****		C132	1-164-159-11	CERAMIC 0. 1uF 50V	
*	A-4356-985-A	MAIN BOARD, COMPLETE (D359:AEP2) *****		C133	1-164-159-11	CERAMIC 0. 1uF 50V	
*	A-4360-000-A	MAIN BOARD, COMPLETE (A37) *****		C141	1-162-286-31	CERAMIC 220PF 10% 50V	(D309:G, IT/D359:IT)
*	A-4360-131-A	MAIN BOARD, COMPLETE (D309:G) *****		C142	1-162-286-31	CERAMIC 220PF 10% 50V	(D309:G, IT/D359:IT)
*	A-4360-177-A	MAIN BOARD, COMPLETE (D309:AEP1, EE, CIS) *****		C151	1-124-925-11	ELECT 2. 2uF 20% 100V	
*	A-4360-185-A	MAIN BOARD, COMPLETE (D309:IT) *****		C152	1-164-073-11	CERAMIC 100PF 10% 50V	
*	A-4360-505-A	MAIN BOARD, COMPLETE (D359:IT) *****		C153	1-164-066-11	CERAMIC 68PF 5% 50V	
*	A-4360-991-A	MAIN BOARD, COMPLETE (D359:UK) *****		C154	1-124-126-00	ELECT 47uF 20% 10V	
*	A-4360-499-A	MAIN BOARD, COMPLETE (D359:AEP1)		C155	1-161-377-00	CERAMIC 0. 0047uF 30% 16V	
				C156	1-161-374-11	CERAMIC 0. 0015uF 20% 50V	
				C157	1-124-464-11	ELECT 0. 22uF 20% 50V	
				C158	1-124-126-00	ELECT 47uF 20% 10V	
				C161	1-124-916-11	ELECT 22uF 20% 63V	
				C181	1-124-907-11	ELECT 10uF 20% 50V	
				C182	1-164-159-11	CERAMIC 0. 1uF 50V	
				C183	1-164-159-11	CERAMIC 0. 1uF 50V	
				C191	1-162-286-31	CERAMIC 220PF 10% 50V	(D309:G, IT/D359:IT)
				C192	1-162-286-31	CERAMIC 220PF 10% 50V	(D309:G, IT/D359:IT)
				C431	1-161-379-00	CERAMIC 0. 01uF 20% 25V	
				C432	1-161-379-00	CERAMIC 0. 01uF 20% 25V	
				C731	1-126-176-11	ELECT 220uF 20% 10V	
				C732	1-126-176-11	ELECT 220uF 20% 10V	
				C733	1-124-443-00	ELECT 100uF 20% 10V	
				C734	1-124-916-11	ELECT 22uF 20% 63V	
				C735	1-124-916-11	ELECT 22uF 20% 63V	
				C741	1-136-163-00	FILM 0. 068uF 5% 50V	(D309:G, IT/D359:IT)

MAIN

REVISED

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C742	1-136-163-00	FILM 0.068uF 5% 50V (D309:G, IT/D359:IT)		* CN131	1-568-955-11	PIN, CONNECTOR 6P (A37)	
C743	1-162-294-31	CERAMIC 0.001uF 10% 50V (D309:G, IT/D359:IT)		* CN402	1-568-830-11	SOCKET, CONNECTOR 11P	
C784	1-124-916-11	ELECT 22uF 20% 63V		* CN701	1-564-510-11	PLUG, CONNECTOR 7P	
C785	1-124-916-11	ELECT 22uF 20% 63V		* CN702	1-568-954-11	PIN, CONNECTOR 5P	
C791	1-136-163-00	FILM 0.068uF 5% 50V (D309:G, IT/D359:IT)		CNP131	1-695-090-11	PIN, CONNECTOR (PC BOARD) 13P	
C792	1-136-163-00	FILM 0.068uF 5% 50V (D309:G, IT/D359:IT)		CNP132	1-750-180-11	PIN, CONNECTOR (PC BOARD) 5P	
C793	1-162-294-31	CERAMIC 0.001uF 10% 50V (D309:G, IT/D359:IT)		< DIODE >			
C831	1-136-161-00	FILM 0.047uF 5% 50V		D451	8-719-933-33	DIODE HZS6A1L	
C833	1-126-138-11	ELECT 4700uF 20% 50V (A37)		D702	8-719-987-63	DIODE 1N4148M	
C833	1-126-224-11	ELECT 4700uF 20% 42V (D309, D359)		D703	8-719-987-63	DIODE 1N4148M	
C834	1-124-903-11	ELECT 1uF 20% 50V		D831	8-719-302-38	DIODE RBV-602-01	
C835	1-102-394-11	CERAMIC 0.01uF 250V		D832	8-719-987-63	DIODE 1N4148M	
C836	1-124-557-11	ELECT 1000uF 20% 25V		D836	8-719-200-82	DIODE 11ES2	
C837	1-124-907-11	ELECT 10uF 20% 50V		D837	8-719-200-82	DIODE 11ES2	
C838	1-124-907-11	ELECT 10uF 20% 50V		D838	8-719-987-63	DIODE 1N4148M	
C839	1-124-477-11	ELECT 47uF 20% 25V		D841	8-719-200-82	DIODE 11ES2	
C840	1-124-477-11	ELECT 47uF 20% 25V (A37)		D842	8-719-200-82	DIODE 11ES2	
C840	1-124-126-00	ELECT 47uF 20% 10V (D309/D359)		D843	8-719-001-76	DIODE UZL-12M3	
C841	1-124-907-11	ELECT 10uF 20% 50V		D882	8-719-987-63	DIODE 1N4148M	
C842	1-124-122-11	ELECT 100uF 20% 50V		D886	8-719-200-82	DIODE 11ES2	
C843	1-126-105-11	ELECT 1000uF 20% 35V		D887	8-719-200-82	DIODE 11ES2	
C844	1-126-101-11	ELECT 100uF 20% 16V		D891	8-719-200-82	DIODE 11ES2	
C845	1-126-101-11	ELECT 100uF 20% 16V		D892	8-719-200-82	DIODE 11ES2	
C846	1-124-122-11	ELECT 100uF 20% 50V (D309:AEP2, G/D359:AEP2, UK)		< IC >			
C847	1-124-477-11	ELECT 47uF 20% 25V (D359:AEP2, UK)		IC101	8-759-634-51	IC M5218AP	
C847	1-124-910-11	ELECT 47uF 20% 50V (D309:AEP2, G)		IC103	8-759-000-48	IC MC14052BCP	
C881	1-136-161-00	FILM 0.047uF 5% 50V		IC105	8-759-634-51	IC M5218AP	
C883	1-126-138-11	ELECT 4700uF 20% 50V (A37)		IC106	8-759-000-49	IC MC14066BCP	
C883	1-126-224-11	ELECT 4700uF 20% 42V (D309/D359)		IC731	8-759-111-68	IC uPC1237HA	
C886	1-124-480-11	ELECT 470uF 20% 25V		IC831	8-759-605-00	IC M5F78M07L	
C887	1-124-477-11	ELECT 47uF 20% 25V		IC832	8-759-604-35	IC M5F78M05L	
C888	1-124-907-11	ELECT 10uF 20% 50V		IC841	8-759-604-39	IC AN6291	
C892	1-124-122-11	ELECT 100uF 20% 50V		IC881	8-759-604-95	IC M5F79M07L	
C897	1-161-377-00	CERAMIC 0.0047uF 30% 25V (D309:G, IT/D359:IT)		< JACK >			
< CONNECTOR >				* J101	1-580-912-11	JACK, PIN 4P (PHONO/VIDEO IN) (D309)	
* CN101	1-565-291-11	SOCKET, CONNECTOR 13P (SYSTEM CONTROL)		* J101	1-580-912-21	JACK, PIN 4P (PHONO/VIDEO IN) (A37/D359)	
* CN102	1-566-210-11	PIN, CONNECTOR 3P (POWER SOURCE) (D309:AEP2, G/D359:AEP2, UK)		* J701	1-569-130-11	JACK, PIN 2P (SURROUND SPEAKER)	
< TRANSISTOR >				< COIL >			
				L702	1-420-872-00	COIL, AIR CORE (D309:G, IT/D359:IT)	
				L752	1-420-872-00	COIL, AIR CORE (D309:G, IT/D359:IT)	
				Q103	8-729-119-76	TRANSISTOR 2SA1175-HFE	

REVISED

R733 1-249-436-11 CARBON 39K 5% 1/4W  
(EXCEPT D359: AEP1)  
R733 1-249-437-11 CARBON 47K 5% 1/4W  
(D359: AEP1)

MAIN MIC

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q104	8-729-900-36	TRANSISTOR	DTC124ES	R204	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q704	8-729-900-63	TRANSISTOR	DTA124ES	R205	1-249-427-11	CARBON 6.8K 5% 1/4W	
Q841	8-729-209-15	TRANSISTOR	2SD2012				
< RESISTOR >				R254	1-249-421-11	CARBON 2.2K 5% 1/4W	
R101	1-249-417-11	CARBON 1K 5% 1/4W		R255	1-249-427-11	CARBON 6.8K 5% 1/4W	
R102	1-249-437-11	CARBON 47K 5% 1/4W		R431	1-249-393-11	CARBON 10 5% 1/4W	
R104	1-249-416-11	CARBON 820 5% 1/4W		R432	1-249-417-11	CARBON 1K 5% 1/4W	
R105	1-247-897-11	CARBON 560K 5% 1/4W		R728	1-249-438-11	CARBON 56K 5% 1/4W	
R106	1-249-437-11	CARBON 47K 5% 1/4W					
R107	1-249-409-11	CARBON 220 5% 1/4W		R731	1-249-429-11	CARBON 10K 5% 1/4W	
R108	1-249-441-11	CARBON 100K 5% 1/4W		R732	1-249-441-11	CARBON 100K 5% 1/4W	
R109	1-249-409-11	CARBON 220 5% 1/4W		<del>R733</del>	<del>1-249-436-11</del>	<del>CARBON 39K 5% 1/4W</del>	
R111	1-249-417-11	CARBON 1K 5% 1/4W		R734	1-249-427-11	CARBON 6.8K 5% 1/4W	
R112	1-247-903-00	CARBON 1M 5% 1/4W		R735	1-249-427-11	CARBON 6.8K 5% 1/4W	
R113	1-249-417-11	CARBON 1K 5% 1/4W		<del>R736</del>	<del>1-215-891-11</del>	<del>METAL OXIDE 680 5% 2W F</del>	
R114	1-247-903-00	CARBON 1M 5% 1/4W		R737	1-249-410-11	CARBON 270 5% 1/4W	
R115	1-249-413-11	CARBON 470 5% 1/4W		R738	1-249-410-11	CARBON 270 5% 1/4W	
R116	1-247-903-00	CARBON 1M 5% 1/4W					
R121	1-249-433-11	CARBON 22K 5% 1/4W		R741	1-249-389-11	CARBON 4.7 5% 1/4W	(D309:G, IT/D359:IT)
R122	1-249-433-11	CARBON 22K 5% 1/4W		R742	1-249-389-11	CARBON 4.7 5% 1/4W	(D309:G, IT/D359:IT)
R123	1-249-433-11	CARBON 22K 5% 1/4W					
R124	1-249-433-11	CARBON 22K 5% 1/4W		R778	1-249-437-11	CARBON 47K 5% 1/4W	
R131	1-249-437-11	CARBON 47K 5% 1/4W		R787	1-249-410-11	CARBON 270 5% 1/4W	
R132	1-249-437-11	CARBON 47K 5% 1/4W (A37)		R788	1-249-410-11	CARBON 270 5% 1/4W	
R133	1-249-437-11	CARBON 47K 5% 1/4W		R791	1-249-389-11	CARBON 4.7 5% 1/4W	(D309:G, IT/D359:IT)
R135	1-249-433-11	CARBON 22K 5% 1/4W		R792	1-249-389-11	CARBON 4.7 5% 1/4W	(D309:G, IT/D359:IT)
R136	1-249-433-11	CARBON 22K 5% 1/4W					
R137	1-249-433-11	CARBON 22K 5% 1/4W		R831	1-249-429-11	CARBON 10K 5% 1/4W	
R141	1-249-417-11	CARBON 1K 5% 1/4W	(D309:G, IT/D359:IT)	R841	1-249-421-11	CARBON 2.2K 5% 1/4W	
R151	1-249-417-11	CARBON 1K 5% 1/4W		R881	1-249-429-11	CARBON 10K 5% 1/4W	
R152	1-249-437-11	CARBON 47K 5% 1/4W		< RELAY >			
R154	1-249-416-11	CARBON 820 5% 1/4W		RY701	1-515-533-11	RELAY	
R155	1-247-897-11	CARBON 560K 5% 1/4W		< TERMINAL >			
R156	1-249-437-11	CARBON 47K 5% 1/4W		TM701	1-537-481-11	TERMINAL BOARD (SPEAKER)	(D309:G, IT/D359:IT)
R157	1-249-409-11	CARBON 220 5% 1/4W		TM701	1-537-494-11	TERMINAL BOARD (SPEAKER)	(A37/D309: AEP, EE, CIS/D359: AEP, UK)
R158	1-249-441-11	CARBON 100K 5% 1/4W		*****			
R159	1-249-409-11	CARBON 220 5% 1/4W		*	1-646-980-21	MIC BOARD (A37)	*****
R161	1-249-417-11	CARBON 1K 5% 1/4W		< CAPACITOR >			
R162	1-247-903-00	CARBON 1M 5% 1/4W		C901	1-124-925-11	ELECT 2.2uF 20% 100V	
R163	1-249-417-11	CARBON 1K 5% 1/4W		C902	1-162-294-31	CERAMIC 0.001uF 10% 50V	
R164	1-247-903-00	CARBON 1M 5% 1/4W		C903	1-162-219-31	CERAMIC 68PF 5% 50V	
R165	1-249-413-11	CARBON 470 5% 1/4W		C904	1-162-284-31	CERAMIC 150PF 10% 50V	
R166	1-247-903-00	CARBON 1M 5% 1/4W		C905	1-124-464-11	ELECT 0.22uF 20% 50V	
R181	1-249-437-11	CARBON 47K 5% 1/4W					
R182	1-249-437-11	CARBON 47K 5% 1/4W (A37)					
R183	1-249-437-11	CARBON 47K 5% 1/4W					
R191	1-249-417-11	CARBON 1K 5% 1/4W	(D309:G, IT/D359:IT)				

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

# MIC PANEL

Ref.No.	Part No.	Description	Remark
C906	1-124-477-11	ELECT 47uF 20% 25V	
C956	1-124-477-11	ELECT 47uF 20% 25V	
< IC >			
IC901	8-759-634-51	IC M5218AP	
< JACK >			
* J901	1-573-151-21	JACK, LARGE TYPE (MIC)	
< RESISTOR >			
R901	1-249-429-11	CARBON 10K 5% 1/4W	
R902	1-249-417-11	CARBON 1K 5% 1/4W	
R903	1-249-441-11	CARBON 100K 5% 1/4W	
R904	1-249-412-11	CARBON 390 5% 1/4W	
R905	1-249-441-11	CARBON 100K 5% 1/4W	
R906	1-249-417-11	CARBON 1K 5% 1/4W	
R907	1-249-429-11	CARBON 10K 5% 1/4W	
*****			
*	A-4356-896-A	PANEL BOARD, COMPLETE (D309:AEP)	
*****			
*	A-4356-977-A	PANEL BOARD, COMPLETE (D359:AEP)	
*****			
*	A-4356-995-A	PANEL BOARD, COMPLETE (A37)	
*****			
*	A-4360-124-A	PANEL BOARD, COMPLETE (D309:G)	
*****			
*	A-4360-183-A	PANEL BOARD, COMPLETE (D309:IT)	
*****			
*	A-4360-500-A	PANEL BOARD, COMPLETE (D359:IT)	
*****			
*	A-4360-812-A	PANEL BOARD, COMPLETE (D309:EE, CIS)	
*****			
*	A-4360-917-A	PANEL BOARD, COMPLETE (D359:UK)	
*****			
< CAPACITOR >			
C231	1-164-066-11	CERAMIC 68PF 5% 50V	
C232	1-164-070-11	CERAMIC 100PF 5% 50V	
C233	1-124-907-11	ELECT 10uF 20% 50V	
C234	1-124-257-00	ELECT 2.2uF 20% 50V	
C235	1-162-282-31	CERAMIC 100PF 10% 50V	
C236	1-164-159-11	CERAMIC 0.1uF 50V	
C237	1-124-252-00	ELECT 0.33uF 20% 50V	
C238	1-136-160-00	FILM 0.039uF 5% 50V	

Ref.No.	Part No.	Description	Remark
C239	1-124-126-00	ELECT 47uF 20% 10V	
C240	1-124-126-00	ELECT 47uF 20% 10V	
C241	1-124-903-11	ELECT 1uF 20% 50V	
C242	1-124-443-00	ELECT 100uF 20% 10V	
C281	1-164-066-11	CERAMIC 68PF 5% 50V	
C282	1-164-070-11	CERAMIC 100PF 5% 50V	
C283	1-124-907-11	ELECT 10uF 20% 50V	
C284	1-124-257-00	ELECT 2.2uF 20% 50V	
C285	1-162-282-31	CERAMIC 100PF 10% 50V	
C287	1-124-252-00	ELECT 0.33uF 20% 50V	
C288	1-136-160-00	FILM 0.039uF 5% 50V	
C289	1-124-126-00	ELECT 47uF 20% 10V	
C290	1-124-126-00	ELECT 47uF 20% 10V	
C291	1-124-903-11	ELECT 1uF 20% 50V	
C401	1-126-177-11	ELECT 100uF 20% 10V	
C402	1-161-494-00	CERAMIC 0.022uF 25V	
C403	1-136-165-00	FILM 0.1uF 5% 50V	
C404	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C405	1-125-486-11	DOUBLE LAYERS 0.22F 5.5V	
C406	1-126-157-11	ELECT 10uF 20% 16V	
C407	1-164-159-11	CERAMIC 0.1uF 50V	
C411	1-126-177-11	ELECT 100uF 20% 10V	
C412	1-161-494-00	CERAMIC 0.022uF 25V	
C414	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C415	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C416	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C417	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C441	1-126-177-11	ELECT 100uF 20% 10V	
C442	1-164-159-11	CERAMIC 0.1uF 50V	
C443	1-126-177-11	ELECT 100uF 20% 10V	
C444	1-164-159-11	CERAMIC 0.1uF 50V	
C445	1-130-471-00	MYLAR 0.001uF 5% 50V	
C446	1-126-163-11	ELECT 4.7uF 20% 50V	
C447	1-126-163-11	ELECT 4.7uF 20% 50V	
C448	1-126-157-11	ELECT 10uF 20% 16V	
C601	1-126-177-11	ELECT 100uF 20% 10V	
C602	1-164-159-11	CERAMIC 0.1uF 50V	
C604	1-126-157-11	ELECT 10uF 20% 16V	
C605	1-124-916-11	ELECT 22uF 20% 63V	
C606	1-162-202-31	CERAMIC 13PF 5% 50V	
C607	1-162-202-31	CERAMIC 13PF 5% 50V	
C608	1-126-163-11	ELECT 4.7uF 20% 50V	
C609	1-136-153-00	FILM 0.01uF 5% 50V	
C610	1-164-159-11	CERAMIC 0.1uF 50V	
< FILTER >			
CF401	1-567-775-11	VIBRATOR, CERAMIC (4.19MHz)	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< CONNECTOR >				D600	8-719-987-63	DIODE 1N4148M	
* CN202	1-568-826-11	SOCKET, CONNECTOR 7P		D601	8-719-987-63	DIODE 1N4148M	
* CN401	1-568-830-11	SOCKET, CONNECTOR 11P		D602	8-719-987-63	DIODE 1N4148M	
* CN601	1-568-828-11	SOCKET, CONNECTOR 9P		D603	8-719-987-63	DIODE 1N4148M	
< COMPOSITION CIRCUIT BLOCK >				D604	8-719-987-63	DIODE 1N4148M	
CP431	1-239-054-11	COMPOSITION CIRCUIT BLOCK		D605	8-719-987-63	DIODE 1N4148M (D309:AEP, D359:AEP, UK)	
CP432	1-239-054-11	COMPOSITION CIRCUIT BLOCK		D606	8-719-987-63	DIODE 1N4148M (D309:IT/D359:IT)	
< DIODE >				D607	8-719-987-63	DIODE 1N4148M (D309:EE, CIS)	
D231	8-719-987-63	DIODE 1N4148M		D608	8-719-987-63	DIODE 1N4148M (A37/D309:EE, CIS)	
D232	8-719-987-63	DIODE 1N4148M		D609	8-719-987-63	DIODE 1N4148M	
D281	8-719-987-63	DIODE 1N4148M		D610	8-719-987-63	DIODE 1N4148M	
D401	8-719-200-82	DIODE 11ES2		D611	8-719-987-63	DIODE 1N4148M (A37)	
D402	8-719-987-63	DIODE 1N4148M		D612	8-719-987-63	DIODE 1N4148M	
D403	8-719-200-82	DIODE 11ES2		D613	8-719-987-63	DIODE 1N4148M	
D404	8-719-987-63	DIODE 1N4148M		D614	8-719-987-63	DIODE 1N4148M	
D405	8-719-200-82	DIODE 11ES2		D615	8-719-987-63	DIODE 1N4148M	
D406	8-719-200-82	DIODE 11ES2		D616	8-719-987-63	DIODE 1N4148M	
D407	8-719-200-82	DIODE 11ES2		D617	8-719-987-63	DIODE 1N4148M	
D410	8-719-987-63	DIODE 1N4148M		D618	8-719-987-63	DIODE 1N4148M	
D411	8-719-987-63	DIODE 1N4148M		D619	8-719-987-63	DIODE 1N4148M	
D412	8-719-987-63	DIODE 1N4148M		D620	8-719-987-63	DIODE 1N4148M	
D413	8-719-987-63	DIODE 1N4148M		< FLUORESCENT INDICATOR >			
D414	8-719-987-63	DIODE 1N4148M		FL431	1-519-648-21	INDICATOR TUBE, FLUORESCENT	
D415	8-719-987-63	DIODE 1N4148M		FL601	1-519-732-11	INDICATOR TUBE, FLUORESCENT	
D416	8-719-987-63	DIODE 1N4148M		< IC >			
D418	8-719-200-82	DIODE 11ES2		IC211	8-759-634-51	IC M5218AP	
D419	8-719-200-82	DIODE 11ES2		IC212	8-759-000-48	IC MC14052BCP	
D420	8-719-200-82	DIODE 11ES2		IC401	8-759-635-63	IC M51943BSL	
D422	8-719-301-37	LED SEL2210S-CD		IC402	8-759-160-26	IC uPD75104CW-286	
D423	8-719-301-37	LED SEL2210S-CD		IC403	8-759-820-62	IC LB1639	
D424	8-719-301-37	LED SEL2210S-CD		IC431	8-759-065-88	IC XR-1095	
D425	8-719-301-37	LED SEL2210S-CD		IC601	8-759-157-67	IC TMP47C1270AN-H211	
D426	8-719-301-37	LED SEL2210S-CD		IC602	8-749-922-36	IC GP1U50XB	
D427	8-719-301-37	LED SEL2210S-CD		< COIL >			
D428	8-719-301-37	LED SEL2210S-CD		L401	1-408-080-00	INDUCTOR 100uH	
D429	8-719-301-37	LED SEL2210S-CD		L403	1-410-521-11	INDUCTOR 100uH	
D430	8-719-301-37	LED SEL2210S-CD		L451	1-408-080-00	INDUCTOR 100uH	
D431	8-719-301-37	LED SEL2210S-CD		L601	1-410-521-11	INDUCTOR 100uH	
D432	8-719-301-37	LED SEL2210S-CD		< TRANSISTOR >			
D433	8-719-301-37	LED SEL2210S-CD		Q231	8-729-224-61	TRANSISTOR 2SK246-Y	
D434	8-719-301-37	LED SEL2210S-CD		Q232	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
D435	8-719-301-37	LED SEL2210S-CD		Q232	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
D436	8-719-301-37	LED SEL2210S-CD		Q233	8-729-900-63	TRANSISTOR DTA124ES	
D437	8-719-301-37	LED SEL2210S-CD		Q241	8-729-141-26	TRANSISTOR 2SC3622A-LK	
D438	8-719-301-37	LED SEL2210S-CD		Q242	8-729-900-36	TRANSISTOR DTC124ES	
D439	8-719-301-37	LED SEL2210S-CD					
D440	8-719-313-69	DIODE SEL3210S-CD					
D441	8-719-301-37	LED SEL2210S-CD					

# PANEL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q243	8-729-900-63	TRANSISTOR DTA124ES		R402	1-249-435-11	CARBON 33K 5% 1/4W	
Q281	8-729-224-61	TRANSISTOR 2SK246-Y		R403	1-249-429-11	CARBON 10K 5% 1/4W	
Q282	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)		R404	1-249-437-11	CARBON 47K 5% 1/4W	
Q282	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)		R406	1-249-405-11	CARBON 100 5% 1/4W	
Q291	8-729-141-26	TRANSISTOR 2SC3622A-LK		R409	1-249-433-11	CARBON 22K 5% 1/4W	
Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)		R410	1-249-433-11	CARBON 22K 5% 1/4W	
Q401	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)		R411	1-249-429-11	CARBON 10K 5% 1/4W	
Q432	8-729-900-63	TRANSISTOR DTA124ES		R412	1-249-433-11	CARBON 22K 5% 1/4W	
Q433	8-729-900-63	TRANSISTOR DTA124ES		R413	1-249-433-11	CARBON 22K 5% 1/4W	
Q434	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)		R414	1-249-433-11	CARBON 22K 5% 1/4W	
Q434	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)		R415	1-249-433-11	CARBON 22K 5% 1/4W	
Q435	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)		R416	1-249-417-11	CARBON 1K 5% 1/4W	
Q435	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)		R417	1-249-417-11	CARBON 1K 5% 1/4W	
Q601	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)		R418	1-249-417-11	CARBON 1K 5% 1/4W	
Q601	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)		R419	1-249-433-11	CARBON 22K 5% 1/4W	
Q602	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)		R422	1-249-412-11	CARBON 390 5% 1/4W	
Q602	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)		R423	1-249-412-11	CARBON 390 5% 1/4W	
< RESISTOR >				R424	1-249-412-11	CARBON 390 5% 1/4W	
R230	1-247-903-00	CARBON 1M 5% 1/4W		R425	1-249-412-11	CARBON 390 5% 1/4W	
R231	1-249-417-11	CARBON 1K 5% 1/4W		R426	1-249-412-11	CARBON 390 5% 1/4W	
R232	1-247-903-00	CARBON 1M 5% 1/4W		R427	1-249-411-11	CARBON 330 5% 1/4W	
R233	1-249-429-11	CARBON 10K 5% 1/4W		R428	1-249-412-11	CARBON 390 5% 1/4W	
R234	1-249-421-11	CARBON 2.2K 5% 1/4W		R429	1-249-412-11	CARBON 390 5% 1/4W	
R235	1-249-423-11	CARBON 3.3K 5% 1/4W		R430	1-249-415-11	CARBON 680 5% 1/4W	
R236	1-249-437-11	CARBON 47K 5% 1/4W		R442	1-249-418-11	CARBON 1.2K 5% 1/4W	
R237	1-249-412-11	CARBON 390 5% 1/4W		R443	1-249-409-11	CARBON 220 5% 1/4W	
R238	1-249-427-11	CARBON 6.8K 5% 1/4W		R444	1-249-441-11	CARBON 100K 5% 1/4W	
R239	1-247-903-00	CARBON 1M 5% 1/4W		R445	1-249-409-11	CARBON 220 5% 1/4W	
R240	1-249-435-11	CARBON 33K 5% 1/4W		R446	1-249-441-11	CARBON 100K 5% 1/4W	
R241	1-249-432-11	CARBON 18K 5% 1/4W		R447	1-247-897-11	CARBON 560K 5% 1/4W	
R242	1-249-429-11	CARBON 10K 5% 1/4W		R448	1-247-897-11	CARBON 560K 5% 1/4W	
R243	1-249-433-11	CARBON 22K 5% 1/4W		R449	1-249-427-11	CARBON 6.8K 5% 1/4W	
R244	1-249-433-11	CARBON 22K 5% 1/4W		R450	1-249-436-11	CARBON 39K 5% 1/4W	
R245	1-249-433-11	CARBON 22K 5% 1/4W		R499	1-249-427-11	CARBON 6.8K 5% 1/4W	
R247	1-249-433-11	CARBON 22K 5% 1/4W		R500	1-249-436-11	CARBON 39K 5% 1/4W	
R248	1-249-433-11	CARBON 22K 5% 1/4W		R601	1-249-405-11	CARBON 100 5% 1/4W	
R249	1-249-425-11	CARBON 4.7K 5% 1/4W		R602	1-249-417-11	CARBON 1K 5% 1/4W	
R280	1-247-903-00	CARBON 1M 5% 1/4W		R603	1-249-429-11	CARBON 10K 5% 1/4W	
R281	1-249-417-11	CARBON 1K 5% 1/4W		R604	1-249-425-11	CARBON 4.7K 5% 1/4W	
R282	1-247-903-00	CARBON 1M 5% 1/4W		R605	1-249-441-11	CARBON 100K 5% 1/4W	
R283	1-249-429-11	CARBON 10K 5% 1/4W		R606	1-249-405-11	CARBON 100 5% 1/4W	
R284	1-249-421-11	CARBON 2.2K 5% 1/4W		R607	1-249-409-11	CARBON 220 5% 1/4W	
R285	1-249-423-11	CARBON 3.3K 5% 1/4W		R608	1-249-409-11	CARBON 220 5% 1/4W	
R286	1-249-437-11	CARBON 47K 5% 1/4W		R609	1-249-409-11	CARBON 220 5% 1/4W	
R287	1-249-412-11	CARBON 390 5% 1/4W		R610	1-249-409-11	CARBON 220 5% 1/4W	
R288	1-249-427-11	CARBON 6.8K 5% 1/4W		R611	1-249-421-11	CARBON 2.2K 5% 1/4W	
R289	1-247-903-00	CARBON 1M 5% 1/4W		R612	1-249-423-11	CARBON 3.3K 5% 1/4W	
R299	1-249-425-11	CARBON 4.7K 5% 1/4W		R613	1-249-441-11	CARBON 100K 5% 1/4W	
R401	1-249-417-11	CARBON 1K 5% 1/4W		R614	1-249-441-11	CARBON 100K 5% 1/4W	
				R615	1-249-441-11	CARBON 100K 5% 1/4W	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R616	1-249-429-11	CARBON 10K 5% 1/4W		S419	1-554-303-21	SWITCH, TACTILE (HALL/1)	
R617	1-249-433-11	CARBON 22K 5% 1/4W		S420	1-554-303-21	SWITCH, TACTILE (DANCE/2)	
R618	1-249-425-11	CARBON 4.7K 5% 1/4W		S421	1-554-303-21	SWITCH, TACTILE (MOVIE/3)	
R619	1-249-429-11	CARBON 10K 5% 1/4W					
R620	1-249-429-11	CARBON 10K 5% 1/4W		S422	1-554-303-21	SWITCH, TACTILE (WM/4)	
R621	1-249-429-11	CARBON 10K 5% 1/4W		S423	1-554-303-21	SWITCH, TACTILE (CAR/5)	
R622	1-249-429-11	CARBON 10K 5% 1/4W		S424	1-554-303-21	SWITCH, TACTILE (DBS ON/OFF)	
R623	1-249-429-11	CARBON 10K 5% 1/4W		S601	1-554-303-21	SWITCH, TACTILE (1)	
R624	1-249-429-11	CARBON 10K 5% 1/4W		S602	1-554-303-21	SWITCH, TACTILE (2)	
R625	1-249-429-11	CARBON 10K 5% 1/4W		S603	1-554-303-21	SWITCH, TACTILE (3)	
R626	1-249-429-11	CARBON 10K 5% 1/4W		S604	1-554-303-21	SWITCH, TACTILE (4)	
R627	1-249-425-11	CARBON 4.7K 5% 1/4W		S605	1-554-303-21	SWITCH, TACTILE (5)	
R628	1-249-425-11	CARBON 4.7K 5% 1/4W		S606	1-554-303-21	SWITCH, TACTILE (6)	
R629	1-249-425-11	CARBON 4.7K 5% 1/4W		S607	1-554-303-21	SWITCH, TACTILE (7)	
R630	1-249-425-11	CARBON 4.7K 5% 1/4W		S608	1-554-303-21	SWITCH, TACTILE (8)	
R631	1-249-425-11	CARBON 4.7K 5% 1/4W		S609	1-554-303-21	SWITCH, TACTILE (9)	
R632	1-249-425-11	CARBON 4.7K 5% 1/4W		S610	1-554-303-21	SWITCH, TACTILE (0)	
R633	1-249-441-11	CARBON 100K 5% 1/4W		S611	1-554-303-21	SWITCH, TACTILE (UP)	
R634	1-249-425-11	CARBON 4.7K 5% 1/4W		S612	1-554-303-21	SWITCH, TACTILE (DOWN)	
R635	1-249-429-11	CARBON 10K 5% 1/4W		S613	1-554-303-21	SWITCH, TACTILE (SHIFT)	
R636	1-249-441-11	CARBON 100K 5% 1/4W		S614	1-554-303-21	SWITCH, TACTILE (BAND SELECT)	
R637	1-249-441-11	CARBON 100K 5% 1/4W		S615	1-554-303-21	SWITCH, TACTILE (MEMORY)	
R638	1-249-441-11	CARBON 100K 5% 1/4W		S616	1-554-303-21	SWITCH, TACTILE (ONCE)	
R639	1-249-441-11	CARBON 100K 5% 1/4W		S617	1-554-303-21	SWITCH, TACTILE (DAILY)	
< VARIABLE RESISTOR >				S618	1-554-303-21	SWITCH, TACTILE (NEXT)	
RV231	1-223-251-11	RES, VAR, CARBON 100K/100K (DBS LEVEL)		S619	1-554-303-21	SWITCH, TACTILE (CLOCK)	
RV232	1-223-251-11	RES, VAR, CARBON 100K/100K (FREQUENCY (Hz))		S620	1-554-303-21	SWITCH, TACTILE (SLEEP)	
RV241	1-223-253-11	RES, VAR, CARBON 100K/100K (BALANCE)		S621	1-554-303-21	SWITCH, TACTILE (CONTROL)	
< SWITCH >				S622	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S401	1-554-303-21	SWITCH, TACTILE (FLAT)		S623	1-554-303-21	SWITCH, TACTILE (BACK)	
S402	1-554-303-21	SWITCH, TACTILE (REVERSE)		S624	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S403	1-554-303-21	SWITCH, TACTILE (EFFECT)		S625	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S404	1-554-303-21	SWITCH, TACTILE (EQ REC)		S626	1-554-303-21	SWITCH, TACTILE (ST/MUTE)	
S406	1-554-303-21	SWITCH, TACTILE (VIDEO)		S627	1-554-303-21	SWITCH, TACTILE (TIMER MODE)	
S407	1-554-303-21	SWITCH, TACTILE (TAPE)		S628	1-554-303-21	SWITCH, TACTILE (CHARACTER)	
S408	1-554-303-21	SWITCH, TACTILE (CD)		< VIBRATOR >			
S409	1-554-303-21	SWITCH, TACTILE (TUNER)		X601	1-579-564-21	VIBRATOR, CRYSTAL (8.388608MHz)	
S410	1-554-303-21	SWITCH, TACTILE (PHONO)		*****			
S411	1-554-303-21	SWITCH, TACTILE (SURROUND)		* A-4360-816-A POLAR BOARD, COMPLETE (D309:CIS)			
S412	1-554-303-21	SWITCH, TACTILE (UP)		*****			
S413	1-554-303-21	SWITCH, TACTILE (LEFT)		< CAPACITOR >			
S414	1-554-303-21	SWITCH, TACTILE (RIGHT)		C1701	1-162-294-31	CERAMIC 0.001uF 10% 50V	
S415	1-554-303-21	SWITCH, TACTILE (DOWN)		C1702	1-104-294-11	POLYSTYRENE 470PF 5% 50V	
S416	1-554-303-21	SWITCH, TACTILE (MEMORY)		C1703	1-124-902-00	ELECT 0.47uF 20% 50V	
S417	1-554-303-21	SWITCH, TACTILE (PERSONAL FILE)		C1704	1-124-902-00	ELECT 0.47uF 20% 50V	
S418	1-554-303-21	SWITCH, TACTILE (DISPLAY)		C1705	1-164-098-11	CERAMIC 0.047uF 12V	
				C1706	1-124-903-11	ELECT 1uF 20% 50V	



## POLAR

## POWER

Ref.No.	Part No.	Description	Remark
C1707	1-162-288-31	CERAMIC 330PF 10% 50V	
C1708	1-124-903-11	ELECT 1uF 20% 50V	
C1709	1-124-903-11	ELECT 1uF 20% 50V	
C1710	1-130-471-00	MYLAR 0.001uF 5% 50V	
C1710	1-137-364-91	FILM 0.001uF 5% 50V	
C1711	1-130-471-00	MYLAR 0.001uF 5% 50V	
C1711	1-137-364-91	FILM 0.001uF 5% 50V	
C1712	1-130-736-11	FILM 0.01uF 5% 50V	
C1713	1-130-736-11	FILM 0.01uF 5% 50V	
C1714	1-124-903-11	ELECT 1uF 20% 50V	
C1715	1-124-903-11	ELECT 1uF 20% 50V	
C1716	1-124-903-11	ELECT 1uF 20% 50V	
C1717	1-162-291-31	CERAMIC 560PF 10% 50V	
C1718	1-162-291-31	CERAMIC 560PF 10% 50V	
C1719	1-124-477-11	ELECT 47uF 20% 25V	
C1720	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1721	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1722	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1723	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1724	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1725	1-124-477-11	ELECT 47uF 20% 25V	
C1726	1-124-903-11	ELECT 1uF 20% 50V	
C1727	1-124-903-11	ELECT 1uF 20% 50V	
C1728	1-124-034-51	ELECT 33uF 20% 16V	
C1729	1-124-907-11	ELECT 10uF 20% 50V	

## &lt; CONNECTOR &gt;

\* CN1701 1-568-832-11 SOCKET, CONNECTOR 13P

## &lt; DIODE &gt;

D1701	8-719-987-63	DIODE 1N4148M
D1702	8-719-987-63	DIODE 1N4148M
D1703	8-719-987-63	DIODE 1N4148M
D1704	8-719-987-63	DIODE 1N4148M
D1705	8-719-987-63	DIODE 1N4148M

## &lt; IC &gt;

IC1701	8-759-063-04	IC IR3R42
IC1702	8-759-634-51	IC M5218AP
IC1703	8-759-140-53	IC MC14053BCP

## &lt; COIL &gt;

L1701	1-409-497-11	COIL (FILTER)
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## &lt; TRANSISTOR &gt;

Q1701	8-729-900-61	TRANSISTOR DTA114ES
Q1702	8-729-900-80	TRANSISTOR DTC114ES
Q1703	8-729-900-80	TRANSISTOR DTC114ES
Q1704	8-729-900-80	TRANSISTOR DTC114ES
Q1705	8-729-900-61	TRANSISTOR DTA114ES

Ref.No.	Part No.	Description	Remark
< RESISTOR >			
R1701	1-249-432-11	CARBON 18K 5% 1/4W	
R1702	1-249-435-11	CARBON 33K 5% 1/4W	
R1703	1-249-427-11	CARBON 6.8K 5% 1/4W	
R1704	1-247-858-11	CARBON 13K 5% 1/4W	
R1705	1-249-417-11	CARBON 1K 5% 1/4W	
R1706	1-249-417-11	CARBON 1K 5% 1/4W	
R1707	1-249-441-11	CARBON 100K 5% 1/4W	
R1708	1-249-440-11	CARBON 82K 5% 1/4W	
R1709	1-249-439-11	CARBON 68K 5% 1/4W	
R1710	1-249-439-11	CARBON 68K 5% 1/4W	
R1711	1-249-439-11	CARBON 68K 5% 1/4W	
R1712	1-247-878-00	CARBON 91K 5% 1/4W	
R1713	1-247-878-00	CARBON 91K 5% 1/4W	
R1714	1-249-441-11	CARBON 100K 5% 1/4W	
R1715	1-249-441-11	CARBON 100K 5% 1/4W	
R1716	1-249-441-11	CARBON 100K 5% 1/4W	
R1717	1-249-441-11	CARBON 100K 5% 1/4W	
R1718	1-249-429-11	CARBON 10K 5% 1/4W	
R1719	1-249-429-11	CARBON 10K 5% 1/4W	
R1720	1-249-429-11	CARBON 10K 5% 1/4W	
R1721	1-249-434-11	CARBON 27K 5% 1/4W	
R1722	1-249-441-11	CARBON 100K 5% 1/4W	

## &lt; VARIABLE RESISTOR &gt;

RV1701	1-238-601-11	RES, ADJ, CARBON 22K
RV1702	1-238-599-11	RES, ADJ, CARBON 4.7K

## &lt; SWITCH &gt;

S1701	1-571-303-11	SWITCH, SLIDE
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## &lt; TEST PIN &gt;

* TP1701	1-560-061-00	PIN, CONNECTOR 3P
* TP1702	1-560-061-00	PIN, CONNECTOR 3P

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* A-4356-906-A	POWER BOARD, COMPLETE (D309)
*****	

* A-4356-987-A	POWER BOARD, COMPLETE (D359:AEP, IT)
*****	

* A-4356-993-A	POWER BOARD, COMPLETE (D359:UK)
*****	

* A-4360-001-A	POWER BOARD, COMPLETE (A37)
*****	

## &lt; CAPACITOR &gt;

△C1	1-161-744-00	CERAMIC 0.01uF 400V
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The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

# POWER

# POWER AMPLIFIER

Ref.No.	Part No.	Description	Remark
C801	1-124-907-11	ELECT 10uF 20% 50V	
C802	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C803	1-124-907-11	ELECT 10uF 20% 50V	
C804	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C805	1-124-463-00	ELECT 0.1uF 20% 50V	
C806	1-124-360-00	ELECT 1000uF 20% 16V	
		(D309, D359)	
C806	1-124-557-11	ELECT 1000uF 20% 25V	
		(A37)	
C807	1-136-165-00	FILM 0.1uF 5% 50V	
C811	1-124-910-11	ELECT 47uF 20% 50V	
C812	1-124-907-11	ELECT 10uF 20% 50V	
C813	1-124-122-11	ELECT 100uF 20% 50V	
< CONNECTOR >			
* CN1	1-564-321-00	PIN, CONNECTOR 2P	
* CN802	1-568-934-11	PIN, CONNECTOR 7P	
* CN803	1-568-951-11	PIN, CONNECTOR 2P	
< DIODE >			
D801	8-719-987-63	DIODE 1N4148M	
D802	8-719-200-82	DIODE 11ES2	
D803	8-719-200-82	DIODE 11ES2	
D804	8-719-200-82	DIODE 11ES2	
D805	8-719-200-82	DIODE 11ES2	
D806	8-719-987-63	DIODE 1N4148M	
D811	8-719-014-66	DIODE UZP-5.6B	
D812	8-719-002-60	DIODE UZL-33L	
D813	8-719-200-82	DIODE 11ES2	
D821	8-719-987-63	DIODE 1N4148M	
< IC >			
IC801	8-759-820-13	IC L78MR06	
< TRANSISTOR >			
Q811	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q821	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q821	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
Q822	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)	
Q822	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)	
< RESISTOR >			
R801	1-249-417-11	CARBON 1K 5% 1/4W	
R802	1-249-429-11	CARBON 10K 5% 1/4W	
△R803	1-212-857-00	FUSIBLE 10 5% 1/4W F	
R811	1-249-425-11	CARBON 4.7K 5% 1/4W	
R812	1-249-421-11	CARBON 2.2K 5% 1/4W	
△R813	1-212-934-00	FUSIBLE 1 5% 1/2W F	
R821	1-249-433-11	CARBON 22K 5% 1/4W	
R822	1-249-433-11	CARBON 22K 5% 1/4W	

Ref.No.	Part No.	Description	Remark
< RELAY >			
RY1	1-515-738-11	RELAY, POWER	
*****			
*	A-4356-905-A	POWER AMPLIFIER BOARD, COMPLETE	
		*****	
		(D309:AEP, EE, CIS)	
*	A-4356-986-A	POWER AMPLIFIER BOARD, COMPLETE	
		*****	
		(D359:AEP)	
*	A-4360-002-A	POWER AMPLIFIER BOARD, COMPLETE (A37)	
		*****	
*	A-4360-132-A	POWER AMPLIFIER BOARD, COMPLETE	
		*****	
		(D309:G, IT)	
*	A-4360-506-A	POWER AMPLIFIER BOARD, COMPLETE	
		*****	
		(D359:IT)	
*	A-4360-992-A	POWER AMPLIFIER BOARD, COMPLETE	
		*****	
		(D359:UK)	
< CAPACITOR >			
C701	1-124-927-11	ELECT 4.7uF 20% 100V	
C702	1-110-337-51	MYLAR 150PF 5% 50V	
C703	1-110-339-11	MYLAR 220PF 5% 50V	
C704	1-124-910-11	ELECT 47uF 20% 50V	
C705	1-124-910-11	ELECT 47uF 20% 50V	
C706	1-124-916-11	ELECT 22uF 20% 63V	
C709	1-124-122-11	ELECT 100uF 20% 50V	
C710	1-136-165-00	FILM 0.1uF 5% 50V	
C711	1-136-163-00	FILM 0.068uF 5% 50V	
C712	1-136-163-00	FILM 0.068uF 5% 50V	
C713	1-164-159-11	CERAMIC 0.1uF 50V	
C714	1-124-910-11	ELECT 47uF 20% 50V	
C745	1-164-081-11	CERAMIC 470PF 10% 50V	
		(D309:G, IT/D359:IT)	
C746	1-162-290-31	CERAMIC 470PF 10% 50V	
		(D309:G, IT/D359:IT)	
C751	1-124-927-11	ELECT 4.7uF 20% 100V	
C752	1-110-337-51	MYLAR 150PF 5% 50V	
C753	1-110-339-11	MYLAR 220PF 5% 50V	
C754	1-124-910-11	ELECT 47uF 20% 50V	
C755	1-124-910-11	ELECT 47uF 20% 50V	
C759	1-124-122-11	ELECT 100uF 20% 50V	
C760	1-136-165-00	FILM 0.1uF 5% 50V	
C761	1-136-163-00	FILM 0.068uF 5% 50V	
C762	1-136-163-00	FILM 0.068uF 5% 50V	

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

# POWER AMPLIFIER

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
< CONNECTOR >							
* CN241	1-564-518-11	PLUG, CONNECTOR 3P		R721	1-247-881-00	CARBON 120K 5% 1/4W	
< DIODE >				R722	1-249-437-11	CARBON 47K 5% 1/4W	
D701	8-719-987-63	DIODE 1N4148M		R723	1-249-439-11	CARBON 68K 5% 1/4W	
D751	8-719-987-63	DIODE 1N4148M		R724	1-249-417-11	CARBON 1K 5% 1/4W	
< IC >				R725	1-249-433-11	CARBON 22K 5% 1/4W	
IC701	8-749-920-22	IC STK-4172MK2K (A37)		R726	1-249-433-11	CARBON 22K 5% 1/4W	
IC701	8-749-920-09	IC STK-4152MK2K (D309/D359)		R727	1-249-426-11	CARBON 5.6K 5% 1/4W	
< COIL >				△R739	1-249-383-81	CARBON 1.5 5% 1/4W F	
L701	1-420-872-00	COIL, AIR CORE		R751	1-249-417-11	CARBON 1K 5% 1/4W	
L751	1-420-872-00	COIL, AIR CORE		R752	1-249-438-11	CARBON 56K 5% 1/4W	
< TRANSISTOR >				R753	1-249-414-11	CARBON 560 5% 1/4W	
Q701	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R754	1-249-438-11	CARBON 56K 5% 1/4W	
Q702	8-729-900-80	TRANSISTOR DTC114ES		R755	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)		R755	1-249-427-11	CARBON 6.8K 5% 1/4W (A37)	
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)		R756	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
Q751	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R756	1-249-427-11	CARBON 6.8K 5% 1/4W (A37)	
< RESISTOR >				R757	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
R701	1-249-417-11	CARBON 1K 5% 1/4W		R757	1-249-427-11	CARBON 6.8K 5% 1/4W (A37)	
R702	1-249-438-11	CARBON 56K 5% 1/4W		R758	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)
R703	1-249-414-11	CARBON 560 5% 1/4W		R758	1-249-427-11	CARBON 6.8K 5% 1/4W (A37)	
R704	1-249-438-11	CARBON 56K 5% 1/4W		R759	1-249-421-11	CARBON 2.2K 5% 1/4W	
R705	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)	R760	1-249-421-11	CARBON 2.2K 5% 1/4W	
R705	1-249-427-11	CARBON 6.8K 5% 1/4W (A37)		△R761	1-212-881-11	FUSIBLE 100 5% 1/4W F	
R706	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)	△R762	1-217-151-00	METAL PLATE 0.22 2W	
R706	1-249-427-11	CARBON 6.8K 5% 1/4W (A37)		R763	1-249-397-11	CARBON 22 5% 1/4W	
R707	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)	R764	1-249-397-11	CARBON 22 5% 1/4W	
R707	1-249-427-11	CARBON 6.8K 5% 1/4W (A37)		R765	1-249-417-11	CARBON 1K 5% 1/4W	
R708	1-249-425-11	CARBON 4.7K 5% 1/4W	(D309/D359)	R766	1-249-431-11	CARBON 15K 5% 1/4W	
R708	1-249-427-11	CARBON 6.8K 5% 1/4W (A37)		R767	1-249-441-11	CARBON 100K 5% 1/4W	
R709	1-249-421-11	CARBON 2.2K 5% 1/4W		R768	1-249-397-11	CARBON 22 5% 1/4W	
R710	1-249-421-11	CARBON 2.2K 5% 1/4W		R769	1-249-397-11	CARBON 22 5% 1/4W	
△R711	1-212-881-11	FUSIBLE 100 5% 1/4W F		*****			
△R712	1-217-151-00	METAL PLATE 0.22 2W					
R713	1-249-397-11	CARBON 22 5% 1/4W					
R714	1-249-397-11	CARBON 22 5% 1/4W					
R715	1-249-417-11	CARBON 1K 5% 1/4W					
R716	1-249-431-11	CARBON 15K 5% 1/4W					
R717	1-249-441-11	CARBON 100K 5% 1/4W					
R718	1-249-397-11	CARBON 22 5% 1/4W					
R719	1-249-397-11	CARBON 22 5% 1/4W					
R720	1-249-429-11	CARBON 10K 5% 1/4W					

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

# ST MAIN

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
*	A-4356-901-A	ST MAIN BOARD, COMPLETE (D309:AEP) *****		C259	1-124-902-00	ELECT 0.47uF 20% 50V	
*	A-4356-982-A	ST MAIN BOARD, COMPLETE (D359:AEP) *****		C260	1-136-153-00	FILM 0.01uF 5% 50V	
*	A-4356-989-A	ST MAIN BOARD, COMPLETE (D359:UK) *****		C261	1-136-168-00	FILM 0.18uF 5% 50V	
*	A-4356-998-A	ST MAIN BOARD, COMPLETE (A37) *****		C262	1-130-478-00	MYLAR 0.0039uF 5% 50V	
*	A-4360-123-A	ST MAIN BOARD, COMPLETE (D309:G, IT) *****		C263	1-136-163-00	FILM 0.068uF 5% 50V	
*	A-4360-503-A	ST MAIN BOARD, COMPLETE (D359:IT) *****		C264	1-130-474-00	MYLAR 0.0018uF 5% 50V	
*	A-4360-814-A	ST MAIN BOARD, COMPLETE (D309:EE) *****		C265	1-136-159-00	FILM 0.033uF 5% 50V	
*	A-4360-817-A	ST MAIN BOARD, COMPLETE (D309:CIS) *****		C266	1-130-469-00	MYLAR 680PF 5% 50V	
		< CAPACITOR >		C267	1-136-154-00	FILM 0.012uF 5% 50V	
C202	1-110-339-11	MYLAR 220PF 5% 50V		C268	1-110-340-11	MYLAR 270PF 5% 50V	
C203	1-130-471-00	MYLAR 0.001uF 5% 50V		C269	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C204	1-124-907-11	ELECT 10uF 20% 50V		C270	1-124-916-11	ELECT 22uF 20% 63V	
C205	1-124-907-11	ELECT 10uF 20% 50V		C301	1-161-379-00	CERAMIC 0.01uF 20% 25V (D309:G, IT/D359:IT)	
C206	1-136-163-00	FILM 0.068uF 5% 50V		C302	1-124-477-11	ELECT 47uF 20% 25V	
C207	1-124-903-11	ELECT 1uF 20% 50V		C303	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C208	1-136-158-00	FILM 0.027uF 5% 50V		C305	1-161-379-00	CERAMIC 0.01uF 20% 25V (D309:G, IT/D359:IT)	
C209	1-124-902-00	ELECT 0.47uF 20% 50V		C306	1-161-379-00	CERAMIC 0.01uF 20% 25V (D309:G, IT/D359:IT)	
C210	1-136-153-00	FILM 0.01uF 5% 50V		C307	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C211	1-136-168-00	FILM 0.18uF 5% 50V		C308	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C212	1-130-478-00	MYLAR 0.0039uF 5% 50V		C309	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C213	1-136-163-00	FILM 0.068uF 5% 50V		C310	1-124-477-11	ELECT 47uF 20% 25V	
C214	1-130-474-00	MYLAR 0.0018uF 5% 50V		C311	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C215	1-136-159-00	FILM 0.033uF 5% 50V		C312	1-101-006-00	CERAMIC 0.047uF 50V	
C216	1-130-469-00	MYLAR 680PF 5% 50V		C313	1-123-382-00	ELECT 3.3uF 20% 100V	
C217	1-136-154-00	FILM 0.012uF 5% 50V		C314	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C218	1-110-340-11	MYLAR 270PF 5% 50V		C315	1-161-329-00	CERAMIC 0.0068uF 30% 16V	
C219	1-130-479-00	MYLAR 0.0047uF 5% 50V		C316	1-162-282-31	CERAMIC 100PF 10% 50V	
C220	1-124-916-11	ELECT 22uF 20% 63V		C317	1-162-292-31	CERAMIC 680PF 10% 50V (D309:G, IT/D359:IT)	
C221	1-164-159-11	CERAMIC 0.1uF 50V		C318	1-124-903-11	ELECT 1uF 20% 50V	
C222	1-164-159-11	CERAMIC 0.1uF 50V		C320	1-124-903-11	ELECT 1uF 20% 50V	
C223	1-164-159-11	CERAMIC 0.1uF 50V		C321	1-124-902-00	ELECT 0.47uF 20% 50V	
C252	1-110-339-11	MYLAR 220PF 5% 50V		C322	1-124-463-00	ELECT 0.1uF 20% 50V	
C253	1-130-471-00	MYLAR 0.001uF 5% 50V		C323	1-161-329-00	CERAMIC 0.0068uF 20% 16V	
C254	1-124-907-11	ELECT 10uF 20% 50V		C324	1-161-329-00	CERAMIC 0.0068uF 20% 16V	
C255	1-124-907-11	ELECT 10uF 20% 50V		C325	1-124-477-11	ELECT 47uF 20% 25V	
C256	1-136-163-00	FILM 0.068uF 5% 50V		C326	1-124-907-11	ELECT 10uF 20% 50V	
C257	1-124-903-11	ELECT 1uF 20% 50V		C327	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C258	1-136-158-00	FILM 0.027uF 5% 50V		C328	1-124-463-00	ELECT 0.1uF 20% 50V	
				C329	1-124-927-11	ELECT 4.7uF 20% 100V	
				C330	1-161-379-00	CERAMIC 0.01uF 20% 25V	
				C331	1-126-176-11	ELECT 220uF 20% 10V	
				C332	1-161-379-00	CERAMIC 0.01uF 20% 25V	
				C335	1-161-379-00	CERAMIC 0.01uF 20% 25V	
				C336	1-161-379-00	CERAMIC 0.01uF 20% 25V	
				C339	1-162-210-31	CERAMIC 30PF 5% 50V (D309:AEP, EE, CIS/D359:AEP, UK)	
				C341	1-123-382-00	ELECT 3.3uF 20% 100V	

# ST MAIN

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C342	1-123-382-00	ELECT 3. 3uF 20% 100V		CF303	1-567-389-11	FILTER, CERAMIC (D309:G, IT/D359:IT)	
C343	1-123-382-00	ELECT 3. 3uF 20% 100V		CF303	1-577-070-81	FILTER, CERAMIC	
C344	1-123-382-00	ELECT 3. 3uF 20% 100V				(A37/D309:AEP, EE, CIS/D359:AEP, UK)	
C345	1-161-375-00	CERAMIC 0. 0022uF 20% 50V		CF304	1-577-075-11	OSCILLATOR, CERAMIC	
C346	1-161-375-00	CERAMIC 0. 0022uF 20% 50V				< CONNECTOR >	
C351	1-161-494-00	CERAMIC 0. 022uF 25V		* CN201	1-568-826-11	SOCKET, CONNECTOR 7P	
		(D309:AEP, EE, CIS/D359:AEP, UK)		* CN301	1-568-832-11	SOCKET, CONNECTOR 13P (D309:CIS)	
C352	1-102-120-00	CERAMIC 0. 0018uF 10% 50V		* CN501	1-568-828-11	SOCKET, CONNECTOR 9P	
		(D309:AEP, EE, CIS/D359:AEP, UK)		CNJ131	1-695-095-11	SOCKET, CONNECTOR 13P	
C353	1-161-374-11	CERAMIC 0. 0015uF 20% 50V		CNJ132	1-750-179-11	SOCKET, CONNECTOR 5P	
		(D309:AEP, EE, CIS/D359:AEP, UK)				< COMPOSITION CIRCUIT BLOCK >	
C354	1-161-494-00	CERAMIC 0. 022uF 25V		CP201	1-239-053-11	COMPOSITION CIRCUIT BLOCK	
		(D309:AEP, EE, CIS/D359:AEP, UK)		CP251	1-239-053-11	COMPOSITION CIRCUIT BLOCK	
C361	1-164-098-11	CERAMIC 0. 047uF 12V				< DIODE >	
C362	1-161-494-00	CERAMIC 0. 022uF 25V		D351	8-719-987-63	DIODE 1N4148M	
C363	1-164-159-11	CERAMIC 0. 1uF 50V				(D309:AEP, EE, CIS/D359:AEP, UK)	
		(D309:AEP, EE, CIS/D359:AEP, UK)		D391	8-719-987-63	DIODE 1N4148M (D309:CIS)	
C364	1-161-494-00	CERAMIC 0. 022uF 25V		D392	8-719-987-63	DIODE 1N4148M (D309:CIS)	
		(D309:AEP, EE, CIS/D359:AEP, UK)				< FRONT END >	
C371	1-162-196-31	CERAMIC 5. 6PF 10% 50V		FE301	1-463-857-21	FRONT END (FM) (D309:G, IT/D359:IT)	
		(D309:AEP, EE, CIS/D359:AEP, UK)		FE301	1-465-006-11	FRONT END (FM) (2 GANG) (D359:UK)	
C371	1-162-198-31	CERAMIC 8. 2PF 10% 50V		FE301	1-465-396-11	FRONT END (FM 3GANG) (D309:EE, CIS)	
		(A37/D309:G, IT/D359:IT)		FE301	1-693-090-21	FRONT END (FM) (2 GANG)	
C373	1-162-288-31	CERAMIC 330PF 10% 50V				(A37/D309:AEP/D359:AEP)	
		(A37/D309:AEP, EE, CIS/D359:AEP, UK)		FE351	1-236-463-11	ENCAPSULATED COMPONENT	
C501	1-102-961-00	CERAMIC 27PF 5% 50V				(D309:AEP, EE, CIS/D359:AEP, UK)	
C502	1-102-961-00	CERAMIC 27PF 5% 50V		FE352	1-239-260-11	ENCAPSULATED COMPONENT	
C503	1-124-477-11	ELECT 47uF 20% 25V				(A37/D309:G, IT/D359:IT)	
C504	1-161-379-00	CERAMIC 0. 01uF 20% 25V		FE352	1-239-261-12	ENCAPSULATED COMPONENT	
C505	1-161-379-00	CERAMIC 0. 01uF 20% 25V				(D309:AEP, EE, CIS/D359:AEP, UK)	
C506	1-161-379-00	CERAMIC 0. 01uF 20% 25V				< IC >	
C507	1-161-379-00	CERAMIC 0. 01uF 20% 25V		IC201	8-759-633-78	IC M5289P	
C521	1-124-925-11	ELECT 2. 2uF 20% 100V		IC202	8-759-804-49	IC LC7522 (A37/D359)	
C522	1-124-463-00	ELECT 0. 1uF 20% 50V		IC202	8-759-822-26	IC LC7522K (D309)	
C523	1-161-379-00	CERAMIC 0. 01uF 20% 25V		IC251	8-759-633-78	IC M5289P	
C524	1-161-379-00	CERAMIC 0. 01uF 20% 25V		IC301	8-759-821-45	IC LA1851N	
C525	1-124-477-11	ELECT 47uF 20% 25V		IC501	8-759-820-91	IC LC7218	
		(A37/D309:AEP, G, IT/D359)				< IFT >	
C525	1-126-101-11	ELECT 100uF 20% 16V		IFT301	1-404-713-11	TRANSFORMER, IF	
		(D309:EE, CIS)				< COIL >	
C531	1-136-173-00	FILM 0. 47uF 5% 50V		L301	1-410-686-11	INDUCTOR 1mH	
		(D309:AEP, EE, CIS/D359:AEP, UK)				(A37/D309:G, IT/D359:IT)	
C532	1-161-494-00	CERAMIC 0. 022uF 25V		L301	1-407-500-00	INDUCTOR 4. 7mH	
		(D309:AEP, EE, CIS/D359:AEP, UK)				(D309:AEP, EE, CIS/D359:AEP, UK)	
C533	1-124-463-00	ELECT 0. 1uF 20% 50V				< FILTER >	
		(D309:AEP, EE, CIS/D359:AEP, UK)		CF301	1-567-389-11	FILTER, CERAMIC (D309:G, IT/D359:IT)	
		< FILTER >		CF301	1-577-070-81	FILTER, CERAMIC	
CF301	1-567-389-11	FILTER, CERAMIC (D309:G, IT/D359:IT)				(A37/D309:AEP, EE, CIS/D359:AEP, UK)	
CF301	1-577-070-81	FILTER, CERAMIC		CF302	1-567-389-11	FILTER, CERAMIC (D309:G, IT/D359:IT)	
		(A37/D309:AEP, EE, CIS/D359:AEP, UK)					

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
L351	1-410-525-11	INDUCTOR 220uH (D309:AEP, EE, CIS/D359:AEP, UK)		R253	1-249-427-11	CARBON 6.8K 5% 1/4W	
		< FILTER >		R301	1-249-401-11	CARBON 47 5% 1/4W	
LPF301	1-235-164-00	FILTER, LOW PASS		R302	1-249-405-11	CARBON 100 5% 1/4W (D309:G, IT/D359:IT)	
LPF302	1-235-164-00	FILTER, LOW PASS		R302	1-249-407-11	CARBON 150 5% 1/4W (A37/D309:AEP/D359:AEP)	
		< TRANSISTOR >		R302	1-249-413-11	CARBON 470 5% 1/4W (D309:EE, CIS/D359:UK)	
Q301	8-729-230-99	TRANSISTOR 2SC2669-OY (D309:G, IT/D359:IT)		R303	1-249-411-11	CARBON 330 5% 1/4W (D309:G, IT/D359:IT)	
Q302	8-729-230-99	TRANSISTOR 2SC2669-OY (D309:G, IT/D359:IT)		R304	1-249-432-11	CARBON 18K 5% 1/4W (D309:G, IT/D359:IT)	
Q303	8-729-230-XX	TRANSISTOR 2SC2669-OY		R305	1-249-411-11	CARBON 330 5% 1/4W (D309:G, IT/D359:IT)	
Q304	8-729-230-XX	TRANSISTOR 2SC2669-OY		R306	1-249-434-11	CARBON 27K 5% 1/4W (D309:G, IT/D359:IT)	
Q305	8-729-900-80	TRANSISTOR DTC114ES		R307	1-249-414-11	CARBON 560 5% 1/4W (D309:G, IT/D359:IT)	
Q306	8-729-900-61	TRANSISTOR DTA114ES		R308	1-249-411-11	CARBON 330 5% 1/4W	
Q307	8-729-900-80	TRANSISTOR DTC114ES		R309	1-249-432-11	CARBON 18K 5% 1/4W	
Q308	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)		R310	1-249-411-11	CARBON 330 5% 1/4W	
Q308	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)		R311	1-249-434-11	CARBON 27K 5% 1/4W	
Q309	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309)		R312	1-249-414-11	CARBON 560 5% 1/4W (A37/D309:AEP, EE, CIS/D359:AEP, UK)	
Q309	8-729-620-05	TRANSISTOR 2SC2603-EF (A37/D359)		R312	1-249-416-11	CARBON 820 5% 1/4W (D309:G, IT/D359:IT)	
Q351	8-729-900-80	TRANSISTOR DTC114ES (D309:AEP, EE, CIS/D359:AEP, UK)		R313	1-249-405-11	CARBON 100 5% 1/4W	
Q352	8-729-119-78	TRANSISTOR 2SC2785-HFE (D309:AEP, EE, CIS)		△R315	1-249-404-00	CARBON 82 5% 1/4W	
Q352	8-729-620-05	TRANSISTOR 2SC2603-EF (D359:AEP, UK)		R316	1-249-429-11	CARBON 10K 5% 1/4W	
Q353	8-729-119-76	TRANSISTOR 2SA1175-HFE (D309:AEP, EE, CIS/D359:AEP, UK)		R317	1-249-417-11	CARBON 1K 5% 1/4W	
Q354	8-729-900-80	TRANSISTOR DTC114ES (D309:AEP, EE, CIS/D359:AEP, UK)		R318	1-249-435-11	CARBON 33K 5% 1/4W	
Q355	8-729-900-80	TRANSISTOR DTC114ES (D309:AEP, EE, CIS/D359:AEP, UK)		R319	1-249-428-11	CARBON 8.2K 5% 1/4W	
Q356	8-729-900-80	TRANSISTOR DTC114ES (D309:AEP, EE, CIS/D359:AEP, UK)		R320	1-249-432-11	CARBON 18K 5% 1/4W	
Q501	8-729-900-80	TRANSISTOR DTC114ES		R321	1-249-423-11	CARBON 3.3K 5% 1/4W	
Q502	8-729-900-61	TRANSISTOR DTA114ES		R322	1-249-429-11	CARBON 10K 5% 1/4W	
Q521	8-729-202-67	TRANSISTOR 2SK246-GR3		R323	1-249-418-11	CARBON 1.2K 5% 1/4W (A37/D309:AEP, EE, CIS/D359:AEP, UK)	
Q522	8-729-201-84	TRANSISTOR 2SC3112-B		R323	1-249-423-11	CARBON 3.3K 5% 1/4W (D309:G, IT/D359:IT)	
Q531	8-729-202-67	TRANSISTOR 2SK246-GR3 (D309:AEP, EE, CIS/D359:AEP, UK)		R324	1-249-429-11	CARBON 10K 5% 1/4W	
Q532	8-729-201-84	TRANSISTOR 2SC3112-B (D309:AEP, EE, CIS/D359:AEP, UK)		R325	1-249-429-11	CARBON 10K 5% 1/4W	
		< RESISTOR >		R326	1-249-409-11	CARBON 220 5% 1/4W	
R201	1-249-427-11	CARBON 6.8K 5% 1/4W		R327	1-249-437-11	CARBON 47K 5% 1/4W	
R202	1-249-441-11	CARBON 100K 5% 1/4W		R328	1-249-437-11	CARBON 47K 5% 1/4W	
R203	1-249-427-11	CARBON 6.8K 5% 1/4W		R329	1-249-437-11	CARBON 47K 5% 1/4W (D309:G, IT/D359:IT)	
R211	1-249-417-11	CARBON 1K 5% 1/4W		R330	1-249-435-11	CARBON 33K 5% 1/4W (D309:G, IT/D359:IT)	
R212	1-249-417-11	CARBON 1K 5% 1/4W		R331	1-247-899-11	CARBON 680K 5% 1/4W	
R251	1-249-427-11	CARBON 6.8K 5% 1/4W		R332	1-247-899-11	CARBON 680K 5% 1/4W	
R252	1-249-441-11	CARBON 100K 5% 1/4W		R333	1-249-421-11	CARBON 2.2K 5% 1/4W	
				R334	1-249-421-11	CARBON 2.2K 5% 1/4W	
				R335	1-249-420-11	CARBON 1.8K 5% 1/4W	

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
R336	1-249-420-11	CARBON 1.8K 5% 1/4W	
R337	1-249-426-11	CARBON 5.6K 5% 1/4W	
R338	1-249-426-11	CARBON 5.6K 5% 1/4W	
R351	1-249-433-11	CARBON 22K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R352	1-249-437-11	CARBON 47K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R353	1-247-903-00	CARBON 1M 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R354	1-249-441-11	CARBON 100K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R355	1-249-433-11	CARBON 22K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R356	1-249-421-11	CARBON 2.2K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R361	1-249-437-11	CARBON 47K 5% 1/4W	
R362	1-249-437-11	CARBON 47K 5% 1/4W	
R363	1-249-425-11	CARBON 4.7K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R364	1-249-425-11	CARBON 4.7K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R365	1-249-429-11	CARBON 10K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R366	1-249-413-11	CARBON 470 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R367	1-249-434-11	CARBON 27K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R368	1-249-433-11	CARBON 22K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R370	1-249-423-11	CARBON 3.3K 5% 1/4W	
		(D309:G, IT/D359:IT)	
R501	1-249-417-11	CARBON 1K 5% 1/4W	
R502	1-249-417-11	CARBON 1K 5% 1/4W	
R503	1-249-417-11	CARBON 1K 5% 1/4W	
R504	1-249-417-11	CARBON 1K 5% 1/4W	
R505	1-249-429-11	CARBON 10K 5% 1/4W	
R506	1-249-417-11	CARBON 1K 5% 1/4W	
△R510	1-249-401-11	CARBON 47 5% 1/4W	
R511	1-249-429-11	CARBON 10K 5% 1/4W	
R512	1-249-425-11	CARBON 4.7K 5% 1/4W	
R513	1-249-417-11	CARBON 1K 5% 1/4W	
R514	1-249-429-11	CARBON 10K 5% 1/4W	
R515	1-249-417-11	CARBON 1K 5% 1/4W	
R521	1-249-423-11	CARBON 3.3K 5% 1/4W	
R522	1-249-425-11	CARBON 4.7K 5% 1/4W	
R523	1-249-414-11	CARBON 560 5% 1/4W	
R524	1-249-417-11	CARBON 1K 5% 1/4W	
R525	1-249-410-11	CARBON 270 5% 1/4W	
R526	1-249-421-11	CARBON 2.2K 5% 1/4W	
R527	1-249-425-11	CARBON 4.7K 5% 1/4W	
R528	1-249-425-11	CARBON 4.7K 5% 1/4W	
R529	1-249-405-11	CARBON 100 5% 1/4W	
R530	1-249-405-11	CARBON 100 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R531	1-249-423-11	CARBON 3.3K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R532	1-249-433-11	CARBON 22K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R533	1-249-414-11	CARBON 560 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R534	1-249-417-11	CARBON 1K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R535	1-249-410-11	CARBON 270 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R536	1-249-421-11	CARBON 2.2K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R537	1-249-425-11	CARBON 4.7K 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
R538	1-249-405-11	CARBON 100 5% 1/4W	
		(D309:AEP, EE, CIS/D359:AEP, UK)	
		< VARIABLE RESISTOR >	
RV301	1-238-601-11	RES, ADJ, CARBON 22K	
RV302	1-238-601-11	RES, ADJ, CARBON 22K	
		< TRASFORMER >	
T301	1-404-807-11	TRANSFORMER, DISCRIMINATOR	
T302	1-235-126-00	ENCAPSULATED COMPONENT	
		(D309:G, IT/D359:IT)	
		< TERMINAL >	
TM301	1-537-264-11	TERMINAL BOARD (ANTENNA)	
		(A37/D359:UK)	
* TM301	1-537-288-11	TERMINAL BOARD, ANTENNA (PAL)	
		(ANTENNA) (D309/D359:AEP, IT)	
		< TEST PIN >	
* TP1	1-560-060-00	PIN, CONNECTOR 2P	
		< VIBRATOR >	
XT501	1-577-126-21	VIBRATOR, CRYSTAL (7.2MHz)	
		*****	
*	1-646-974-21	SW BOARD (A37)	
		*****	
		< SWITCH >	
△SW1	1-572-266-11	SWITCH, VOLTAGE SELECTION	
		(VOLTAGE SELECTOR)	
		*****	

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

REVISED

VOL

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
*	1-646-978-11	VOL BOARD (D309) *****				ACCESSORIES & PACKING MATERIALS *****	
*	1-646-978-21	VOL BOARD (A37/D359) ***** < CAPACITOR >				1-466-982-11 COMMANDER, STANDARD (RM-S309) (D309) 1-466-982-21 COMMANDER, STANDARD (RM-S309) (A37, D359) 1-501-369-11 ANTENNA (D359:AEP, IT) 1-501-374-11 ANTENNA, LOOP (D309:AEP, IT, EE, CIS/D359:AEP, IT) 1-501-536-11 ANTENNA (D309:AEP, IT, EE, CIS)	
C413	1-164-159-11	CERAMIC 0.1uF 50V  < VARIABLE RESISTOR >				1-696-860-11 CORD, CONNECTION 13P (D309:AEP1, IT/D359:AEP1, IT)	
RV242	1-223-291-11	RES, VAR, CARBON 100K/100K (VOLUME)		*		3-703-713-41 STICKER, SONY SYMBOL (10) 3-707-584-01 COVER, BATTERY (A37, D359) 3-707-584-21 COVER, BATTERY (D309) 3-756-332-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (D309:AEP)	
*****						3-756-332-41 MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (D309:AEP, IT) 3-756-332-51 MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (D359:IT) 3-756-334-41 MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (D359:AEP)	
		MISCELLANEOUS *****		*		4-957-500-01 INDIVIDUAL CARTON (D309:AEP, IT)	
16	1-696-986-31	WIRE (FLAT TYPE) (7 CORE)		*		4-957-653-01 INDIVIDUAL CARTON (D309:EE, CIS)	
17	1-575-666-11	WIRE, FLAT TYPE (11 CORE)				4-958-606-01 CUSHION (D309:AEP, IT, EE, CIS)	
18	1-751-025-11	WIRE (FLAT TYPE) (9 CORE) (A37, D359)		*****			
* 52	1-533-213-11	HOLDER, FUSE (A37/D359)				HARDWARE LIST *****	
	1-533-217-31	HOLDER, FUSE (D309)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
△63	1-575-653-11	CORD, POWER (A37:E, PX)		#2	7-682-560-04	SCREW +BVTT 4X6 (S) (A37, D309:AEP, G, IT, EE, CIS, D359)	
△64	1-690-608-11	CORD, POWER (A37:AUS)		#3	7-685-871-01	SCREW +BVTT 3X6 (S)	
△65	1-696-570-21	CORD, POWER (D359:UK)		*****			
△66	1-575-651-11	CORD, POWER					
△F801	1-532-078-00	FUSE (1A)					
△F802	1-532-078-00	FUSE (1A)					
△F803	1-532-299-00	FUSE (5A)					
△F804	1-532-299-00	FUSE (5A)					
△F805	1-532-286-00	FUSE (2.5A)					
△F806	1-532-286-00	FUSE (2.5A)					
FL431	1-519-648-21	INDICATOR TUBE, FLUORESCENT					
FL601	1-519-711-11	INDICATOR TUBE, FLUORESCENT					
△T1	1-423-646-21	TRANSFORMER, POWER (D359)					
△	1-423-646-31	TRANSFORMER, POWER (D309)					
△	1-423-647-21	TRANSFORMER, POWER (A37)					
△T2	1-423-499-11	TRANSFORMER, POWER (D309)					
△	1-423-499-21	TRANSFORMER, POWER (D359)					
△	1-423-500-21	TRANSFORMER, POWER (A37)					
*****							

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.





# STR-A37/D309/D359

## SONY<sup>®</sup> SERVICE MANUAL

*AEP Model*  
STR-D309/D359

*UK Model*  
STR-D359

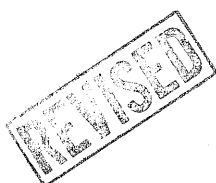
*Australian Model*


*E Model*

*PX Model*  
STR-A37

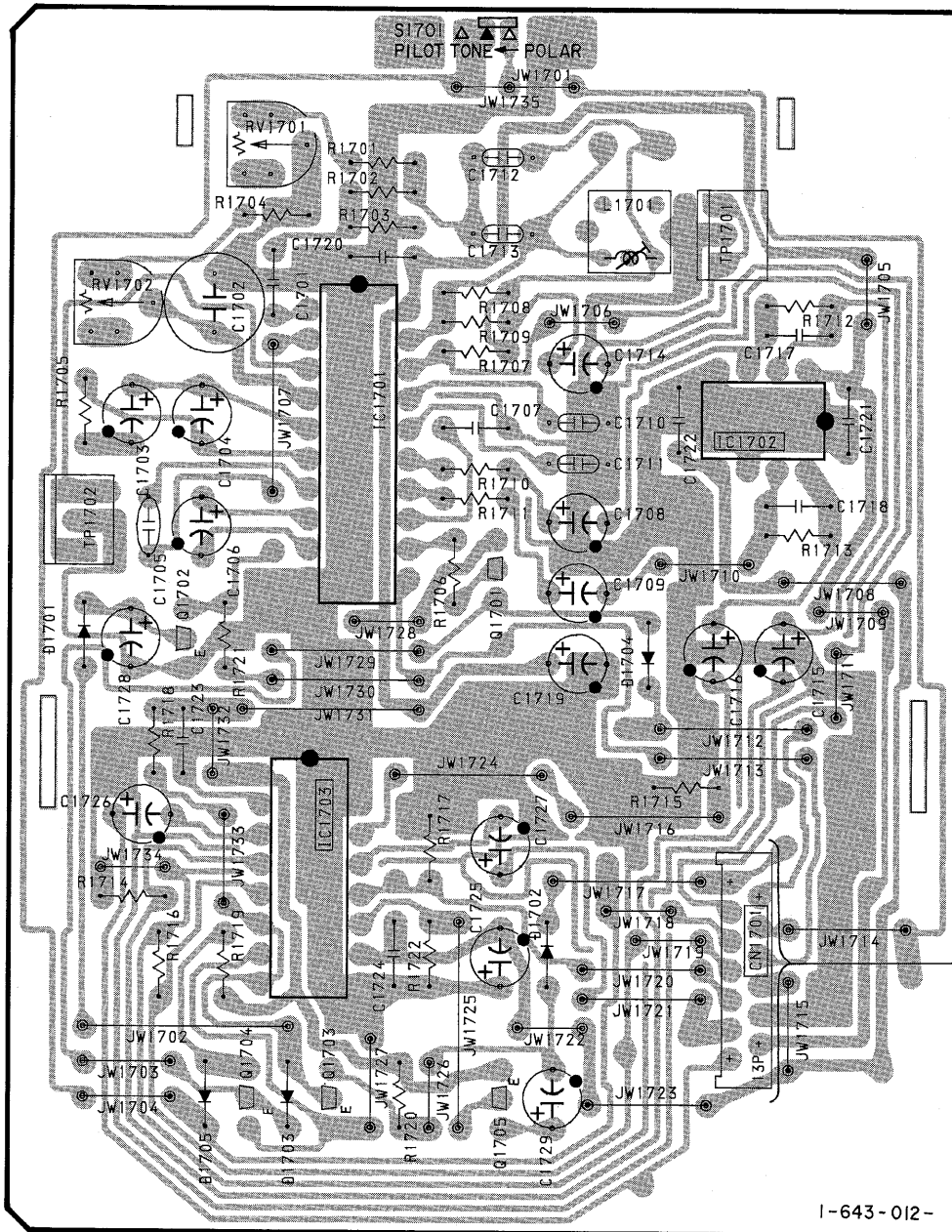
## SUPPLEMENT-1

File this Supplement with the Service Manual.



**Subject : POLAR BOARD**  
(PRINTED WIRING BOARD)  
(CIS Model)  
**: ELECTRICAL ADJUSTMENTS**  
 ~~Correction~~

# 【POLAR BOARD】 (CIS model)



09

13

ST MAIN BOARD  
CN301

(Refer to page 14 for Service Manual)

## ELECTRICAL ADJUSTMENTS

### SUBCARRIER ADJUSTMENT (CIS Model only)

<b>SWITCH POSITION</b>		Function Selector: Radio Band Selector: FM FM mode: Mono			
<b>SIGNAL GENERATOR</b>		69 MHz, 60 dB, FM modulated			
STEP	TEST STAGE	FM TUNING FREQUENCY	SIGNAL GENERATOR	ADJUSTMENT	REMARKS
1	fo	69 MHz	1 kHz (10 kHz dev.)		The value in this state should be 0 dB (Vo).
2			31.25 kHz (10 kHz dev.)	L1701	Adjust for maximal output.
3	Q			RV1701	Indication is +14 dB against Vo.

### VCO FREQUENCY ADJUSTMENT

SIGNAL GENERATOR	1kHz, 30%, FM modulated (mono signal)		
FREQUENCY	FM TUNING FREQUENCY	AD- JUST- MENT	REMARKS
FM mono position		FM stereo position (unmodulated)	
69 MHz at 60 dB	69 MHz	RV1702	Adjust for 31.25 kHz ± 50 Hz.

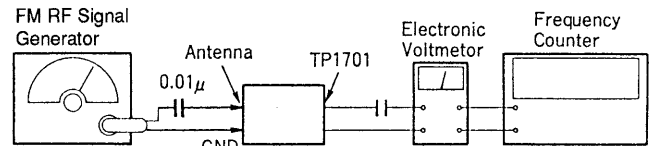


Fig.1 SUBCARRIER

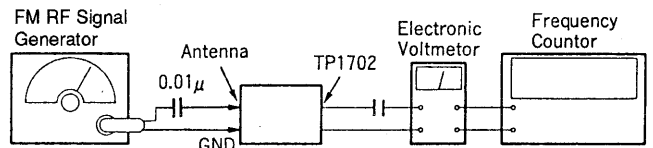
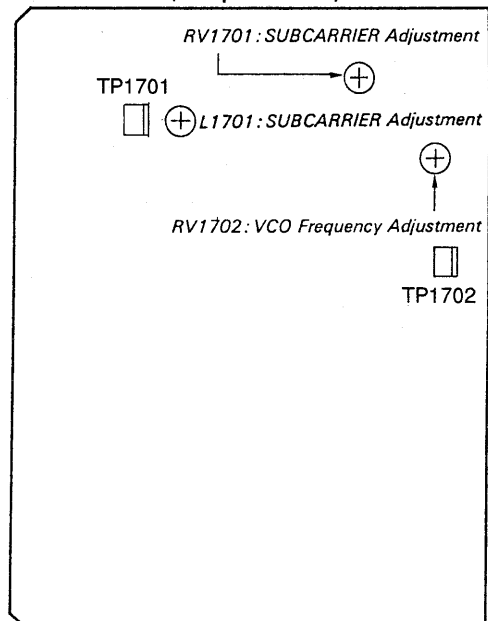


Fig. 2 VCO FREQUENCY

### POLAR BOARD(Component side)



REVISED

• CORRECTION

SECTION 3 DIAGRAMS

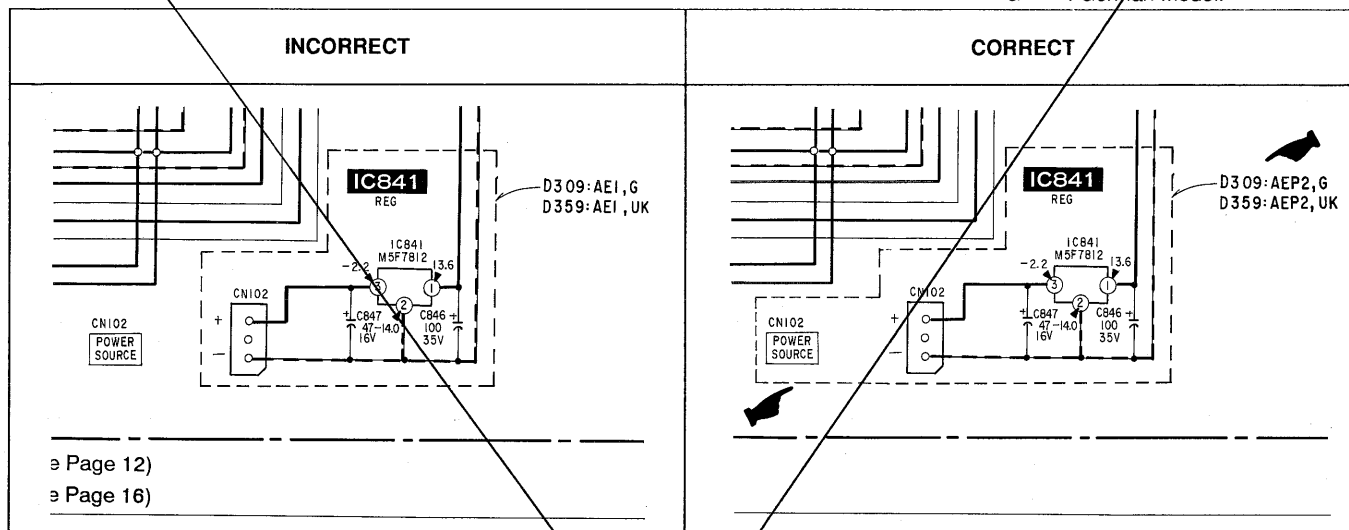
3-10. SCHEMATIC DIAGRAM

• MAIN SECTION (STR-D309/D359) (Page 29)

✶ : Indicates corrected portion.

AEP2 : AEP with POWER SOURCE

G : German model.



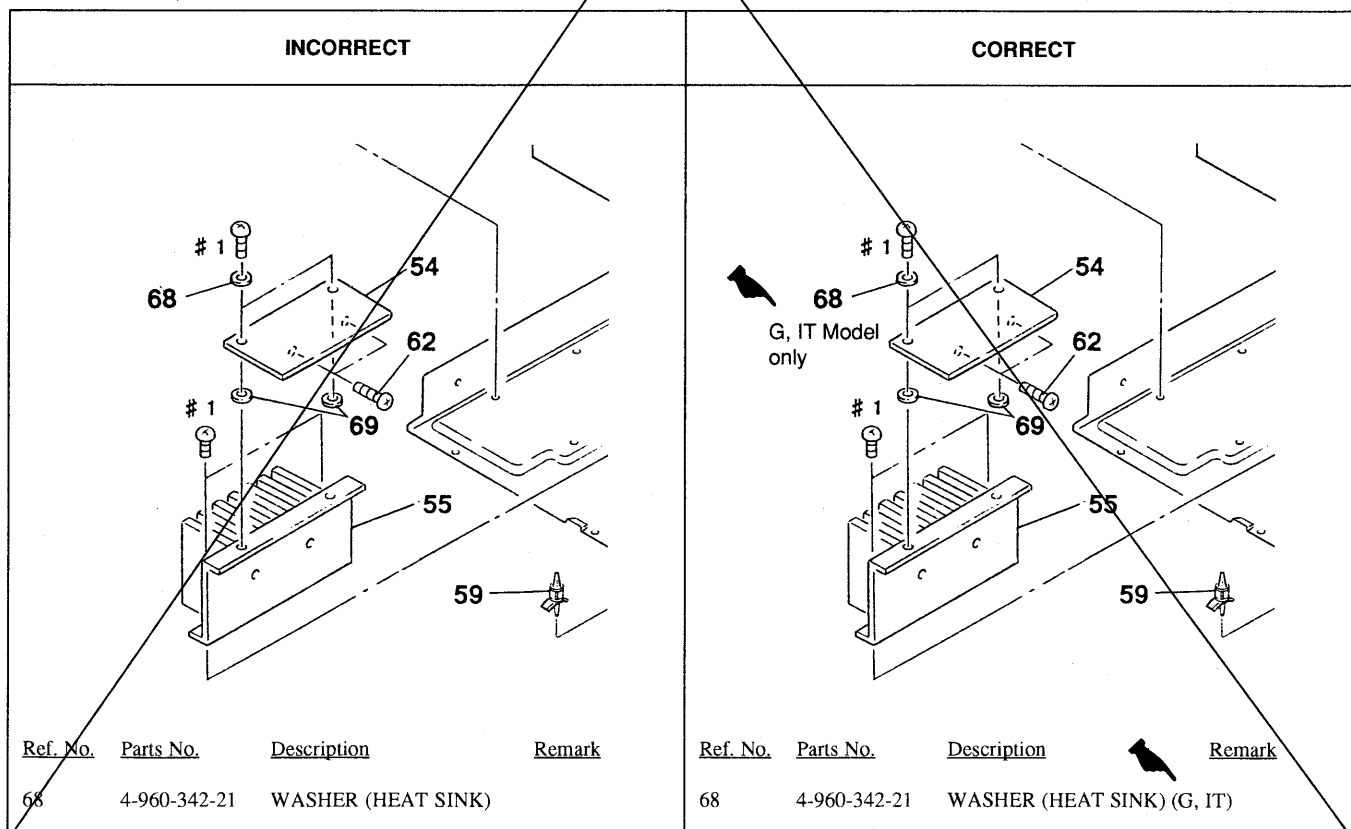
SECTION 4 EXPLODED VIEWS

4-2. CHASSIS SECTION (page 45)

✶ : Indicates corrected portion.

G : German model.

IT : Italian model.



## SECTION 5 ELECTRICAL PARTS LIST

REUSED

✖ : Indicated Corrected portion

AEP1: AEP with out POWER SOURCE

AEP2: AEP with POWER SOURCE

EE: East European model

CIS: CIS model

G: German model

IT: Italian model

PAGE	INCORRECT				CORRECT			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
47	*	A-4356-904-A	MAIN BOARD, COMPLETE (D309:AEP)		*	A-4356-904-A	MAIN BOARD, COMPLETE (D309:AEP2)	
	*	A-4360-174-A	MAIN BOARD, COMPLETE (D309:EE, CIS)		*	A-4360-174-A	MAIN BOARD, COMPLETE (D309:AEP1, EE, CIS)	
	*	A-4356-985-A	MAIN BOARD, COMPLETE (D359:AEP)		*	A-4356-985-A	MAIN BOARD, COMPLETE (D359:AEP2)	
					*	A-4360-499-A	MAIN BOARD, COMPLETE (D359:AEP1)	
48	< CAPACITOR >				< CAPACITOR >			
	C846	1-124-122-11	ELECT 100uF 20% 50V (D309:AEP, G/D359:AEP, UK)		C846	1-124-122-11	ELECT 100uF 20% 25V (D309:AEP2, G/D359:AEP2, UK)	
	C847	1-124-477-11	ELECT 47uF 20% 25V (D309:AEP, G/D359:AEP, UK)		C847	1-124-477-11	ELECT 47uF 20% 25V (D359:AEP2, UK)	
					C847	1-124-910-11	ELECT 47uF 20% 50V (D309:AEP2, G)	
	< CONNECTOR >				< CONNECTOR >			
	* CN102	1-566-210-11	PIN, CONNECTOR 3P (POWER SOURCE) (D309:AEP, G/D359:AEP, UK)		* CN102	1-566-210-11	PIN, CONNECTOR 3P (POWER SOURCE) (D309:AEP2, G/D359:AEP2, UK)	
	< IC >				< IC >			
	IC841	8-759-604-39	IC AN6291 (D309:AEP, G/D359:AEP, UK)		IC841	8-759-604-39	IC AN6291 (D309:AEP2, G/D359:AEP2, UK)	
49	< RESISTOR >				< RESISTOR >			
	R733	1-249-436-11	CARBON 39K 5% 1/4W		R733	1-249-436-11	CARBON 39K 5% 1/4W (EXCEPT D359:AEP1)	
					R733	1-249-437-11	CARBON 47K 5% 1/4W (D359:AEP1)	
61	ACCESSORIES & PACKING MATERIALS *****				ACCESSORIES & PACKING MATERIALS *****			
		1-696-860-11	CORD, CONNECTION 13P (D309:AE2, IT, EE, CIS/D359:AE2, IT)			1-696-860-11	CORD, CONNECTION 13P (D309:AEP1, IT/D359:AEP1, IT)	



# PS-LX52/LX52P

## SERVICE MANUAL REVISED

US Model  
Canadian Model  
AEP Model  
E Model  
Australian Model  
PS-LX52  
UK Model  
PS-LX52P



Photo : PS-LX52

• PS-LX52P is the STEREO TURNTABLE SYSTEM in LBT-D109CD/LBT-A17CD/LBT-D108CD/LBT-D159CD/LBT-D209CD/LBT-D259CD/LBT-D309CD/LBT-D359CD.

### SPECIFICATIONS

#### Turntable

Platter	30cm (12 in.)
Motor	DC servo motor
Drive system	Belt drive
Speed	33 $\frac{1}{3}$ rpm/45 rpm switchable
Wow and flutter	0.2% (WRMS)
Signal-to-noise ratio	60 dB (DIN-B)
Automatic System	Return, reject

#### Tonearm

Type	Dynamically balanced
Pivot-to-stylus length	203 mm (8 in.)
Overall arm length	235 mm (9 $\frac{1}{4}$ in.)

#### Cartridge

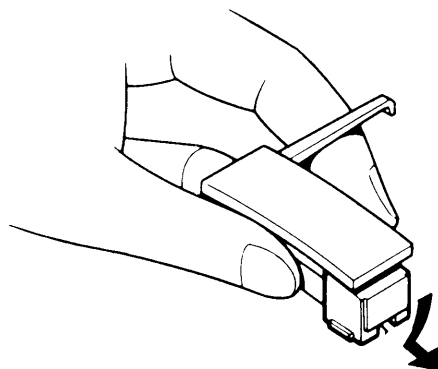
Type	Moving magnet type
Frequency response	20 Hz-20 kHz
Stylus	ND-155G

#### General

Dimensions	355 x 94 x 345 mm (w/h/d) (14 x 3 $\frac{3}{4}$ x 13 $\frac{5}{8}$ inches)
Weight	Approx. 2.5 kg (5 lb 8 oz)
Power requirement	US, Canadian model: 120V AC, 60 Hz AEP, Italian, East European, CIS model: 220-230V AC, 50/60 Hz UK model: 12V DC PX, E, Saudi Arabia, Singapore, Malaysia model: 110-120V/220-240V AC, adjustable with the voltage selector, 50/60 Hz Australian model: 240V AC, 50 Hz
Power consumption	4W (except UK model)
Accessory supplied	45-rpm adaptor (1)
Optional accessories	Replacement stylus ND-155G Stat spray XP-C10 Cleaner XP-C1, XP-C2

Design and specifications subject to change without notice.

### REPLACING THE STYLUS



Replace the stylus after about 400 hours of use because using a worn stylus will damage records. An ND-155G replacement stylus is available at your Sony dealer. Be sure to turn the amplifier off before proceeding with replacement.

1. While holding the cartridge, detach the stylus assembly as illustrated.
2. Insert the new stylus into the cartridge.

STEREO TURNTABLE SYSTEM  
**SONY**®

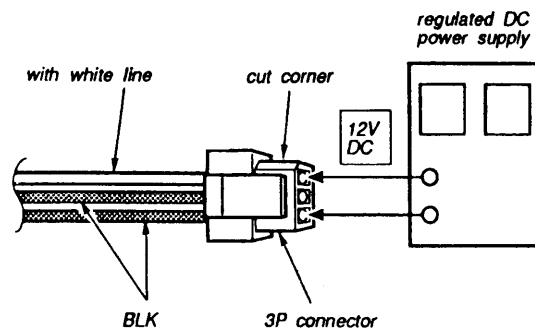




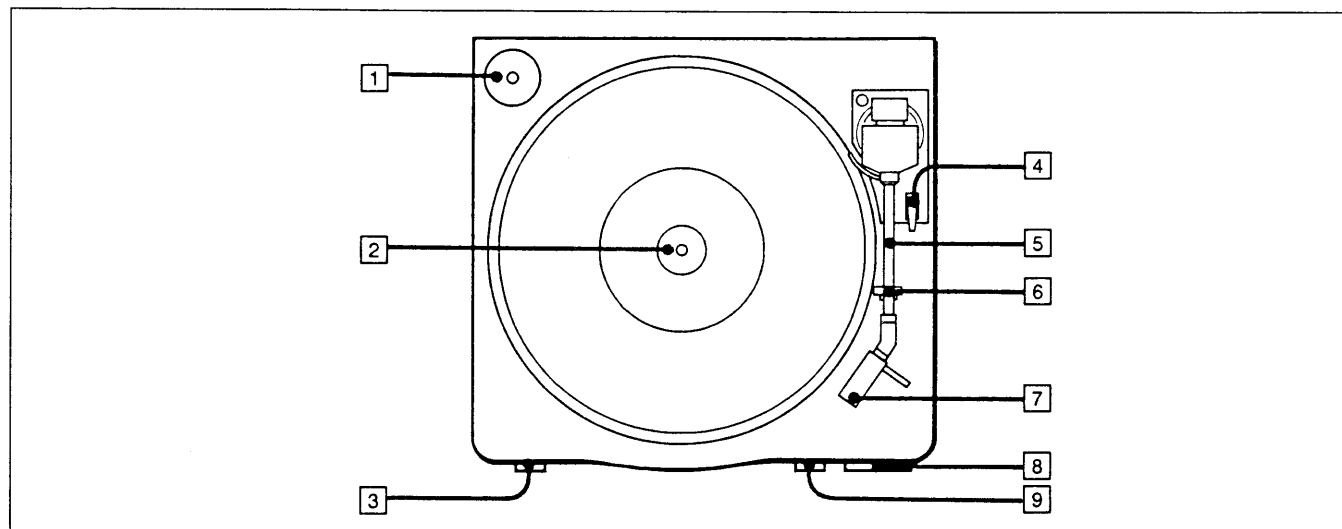
### REPAIRING PRECAUTION (PS-LX52P only)

#### [To supply B+ voltage]

The power of this unit is fed from HST model. Because of this, connect the regulated power supply as illustrated right when this unit alone operates.

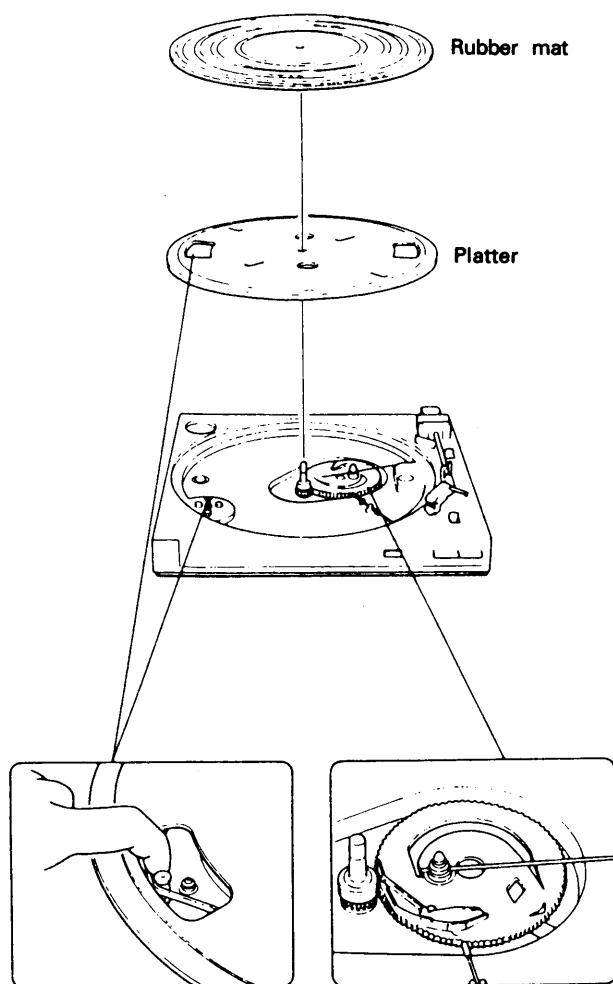


### LOCATION OF CONTROLS



- 1 45-rpm adaptor
- 2 Center spindle
- 3 POWER switch (PS-LX52 only)
- 4 Cueing lever
- 5 Tonearm
- 6 Arm rest
- 7 Cartridge
- 8 REJECT button
- 9 Speed selector

## TURNTABLE ASSEMBLY

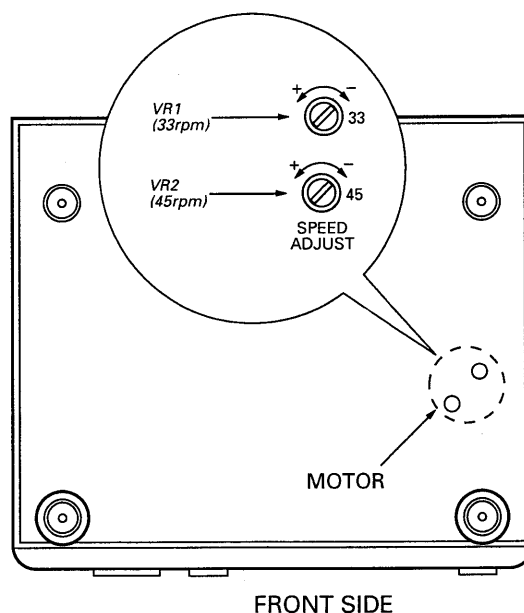


Hook the belt on the motor pulley.  
If the belt is removed from the platter, replace it with the glossy side outward.

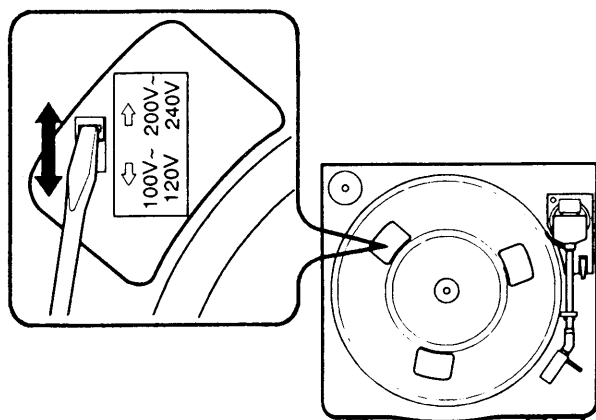
### Speed Adjustment

**Note:** Be sure to perform 45rpm adjustment before 33rpm.

1. Place a stroboscope board on the turntable sheet.
2. Set the SPEED switch to 45.  
Press the START button.  
Adjust VR2 so that the striped pattern of stroboscope board is stationary.
3. Set the SPEED switch to 33.  
Adjust VR1 in the same way.



FRONT SIDE

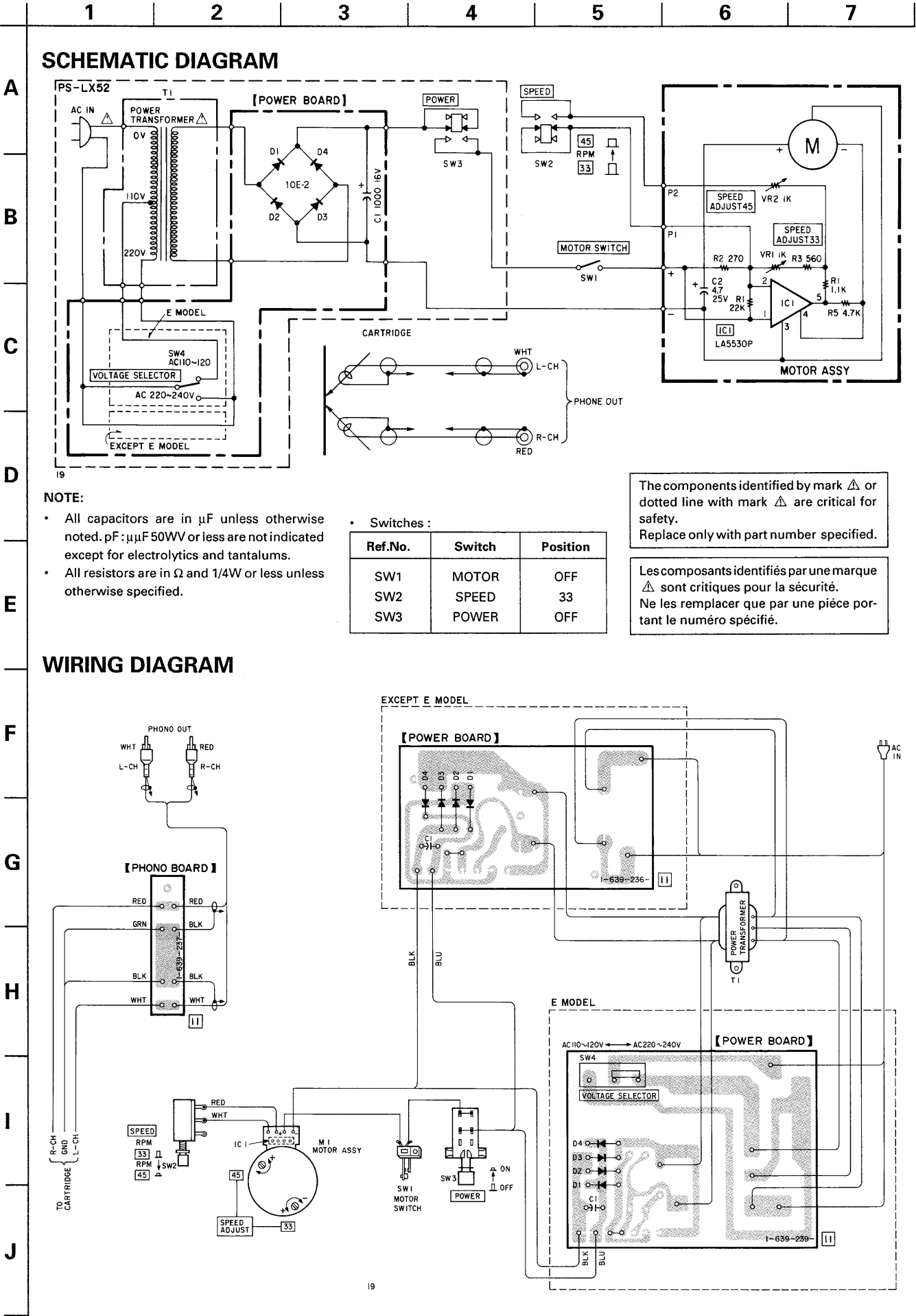


### Setting the Voltage Selector

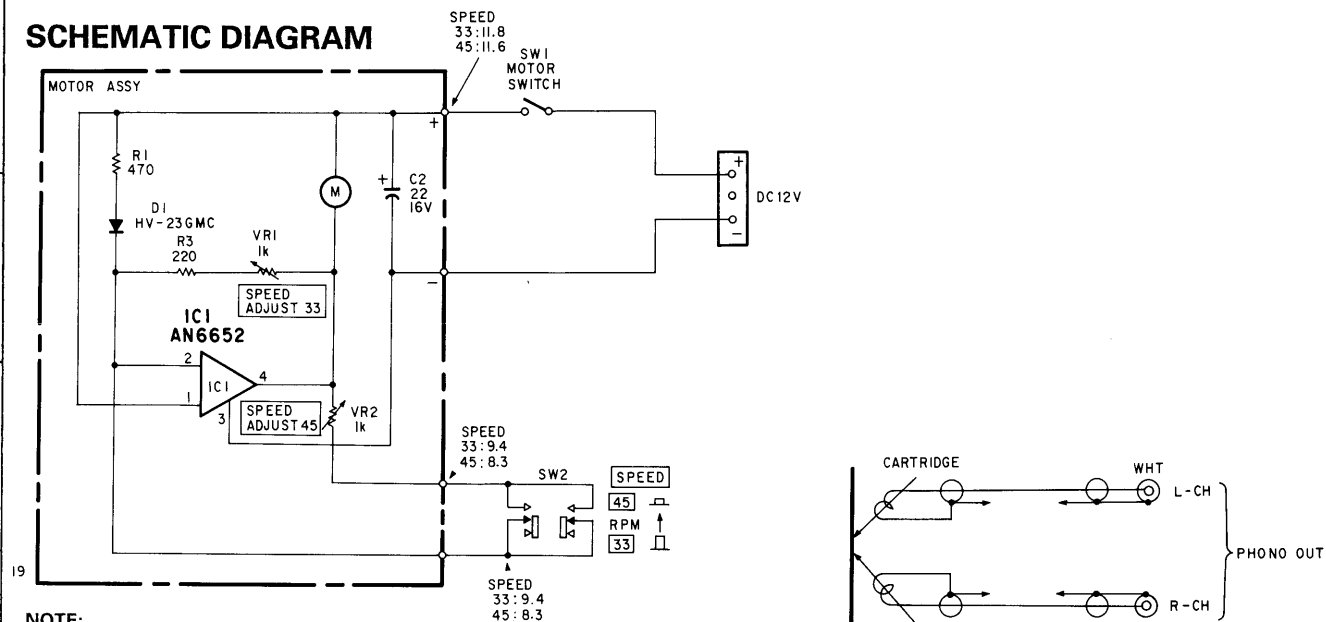
PS-LX52 (E, Saudi Arabia, PX, Singapore, Malaysia model)

**For customers of the model equipped with the voltage selector**

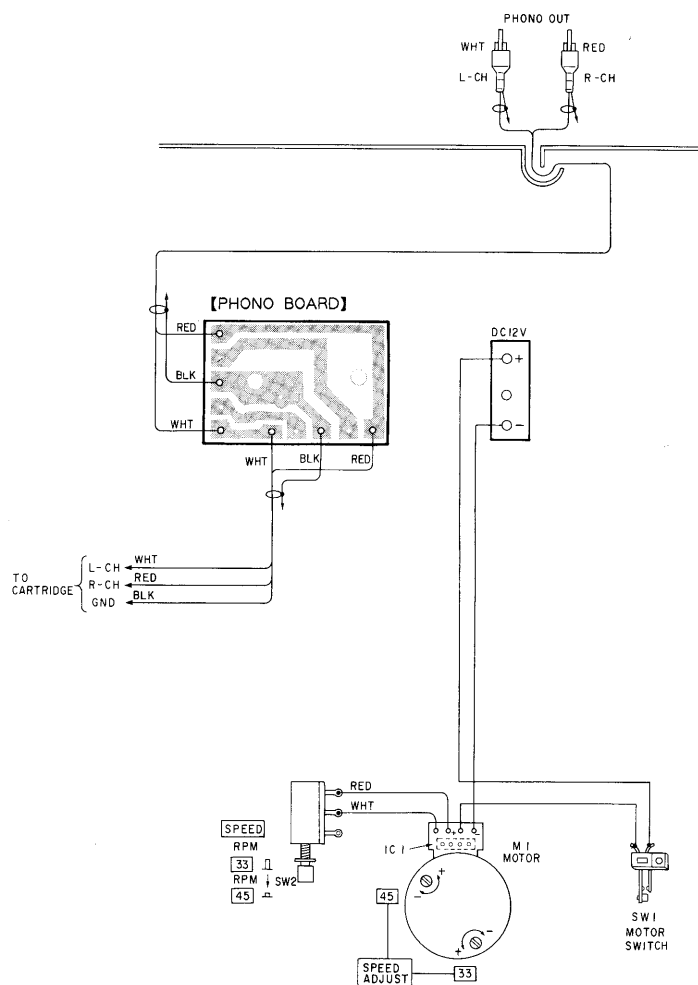
Check to confirm that the voltage selector is set to the local power line voltage. If not, set the voltage selector to the correct position before connecting the AC power cord to a wall outlet.



## SCHEMATIC DIAGRAM





## WIRING DIAGRAM




### EXPLODED VIEW 【PS-LX52】

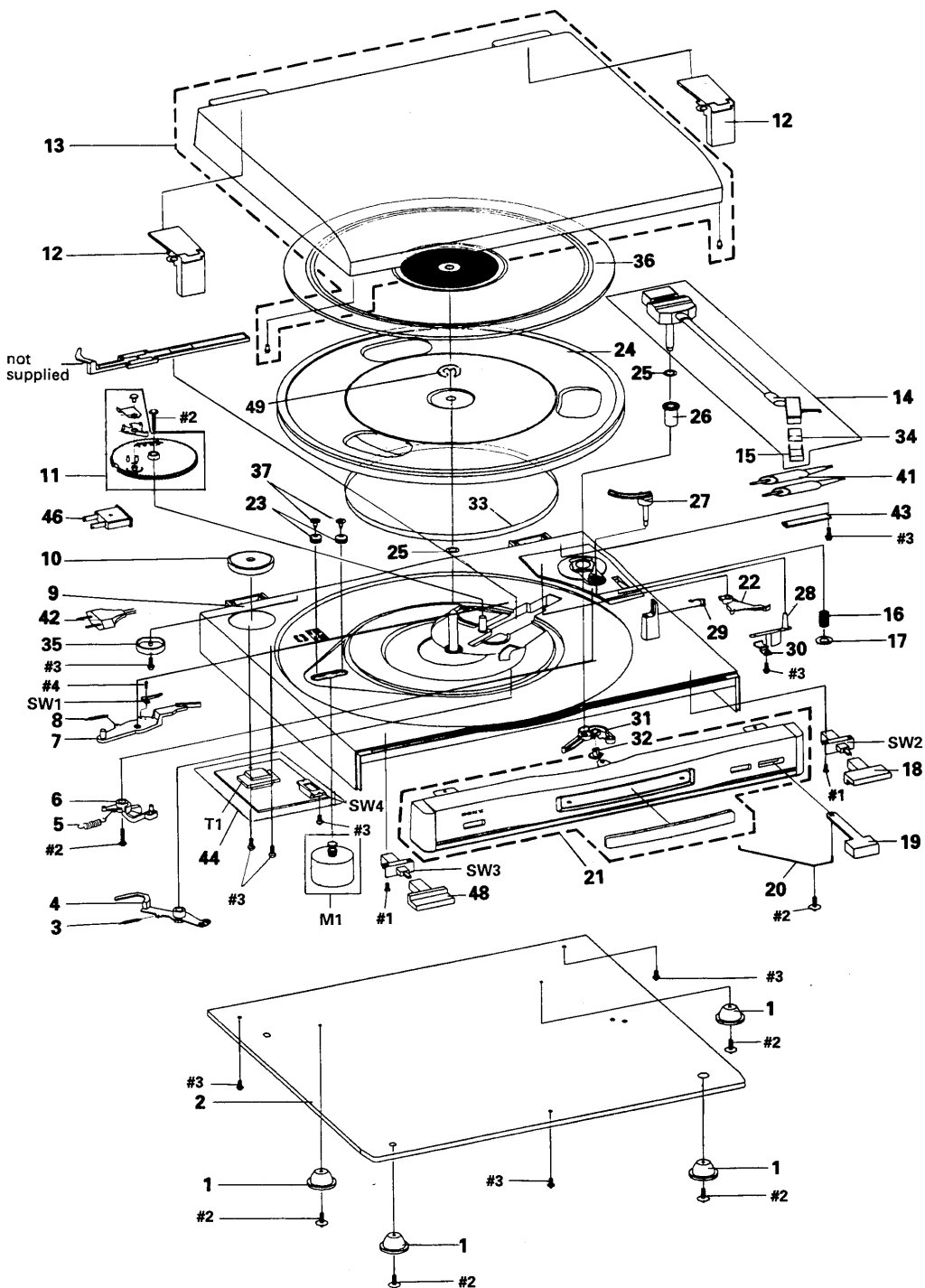
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

The components identified by mark  or dotted line with mark  are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

- PX, Saudi Arabia, Singapore and Malaysia models are identical to E model.
- Italian, EE, and CIS models are identical to AEP model.
- AUS: Australian model
- EE: East European model



Ref.No.	Part No.	Description	Remarks	Ref.No.	Part No.	Description	Remarks
1	4-950-472-01	FOOT		28	4-950-440-01	LEVER-CUEING	
* 2	4-958-328-01	COVER-BOTTOM		29	4-950-439-01	LOCKER-ARM	
3	4-950-453-01	SPRING-REJECT		30	4-950-441-01	BRACKET-CUEING	
4	4-950-452-01	LEVER-REJECT		31	4-950-450-01	ARM-FEED	
5	4-950-455-01	SPRING-ELEVATOR		32	4-950-451-01	CAM-ADJUST	
6	4-950-454-01	ELEVATOR		33	4-950-434-01	BELT	
7	4-950-463-01	ARM-CONTROL		34	4-944-756-01	CARTRIDGE (AT-3600LAX)	
8	4-950-464-01	SPRING-CONTROL ARM		* 35	4-950-514-01	WASHER CODE	
* 9	4-950-431-01	CABINET-UPPER		36	A-4660-142-A	RUBBER ASSY, SHEET	
10	4-950-467-01	ADAPTOR-45RPM		37	4-950-469-01	SCREW-SETTING MOTOR	
11	A-4660-140-A	GEAR ASSY, RING		41	1-590-871-11	CORD, CONNECTION (3 CORE)	
12	4-950-432-01	HINGE		△42	1-590-836-11	CORD, POWER (E)	
13	A-4660-138-A	COVER ASSY, DUST		△42	1-551-294-11	CORD, POWER (AEP)	
14	A-4660-384-A	ARM ASSY, TONE		△42	1-696-382-11	CORD, POWER (US, Canadian)	
15	4-944-756-01	STYLUS (ND-155G)		△42	1-696-848-11	CORD, POWER (AUS)	
16	4-950-442-01	SPRING-ELEVATION		43	1-639-237-11	PHONE BOARD	
17	4-950-444-01	WASHER-C/S		44	1-639-239-11	POWER BOARD (E)	
18	4-956-873-01	BUTTON-SPEED		44	1-639-236-11	POWER BOARD (EXCEPT E)	
19	4-956-872-01	BUTTON-REJECT		△46	1-693-159-11	ADAPTER, AC (E)	
20	4-950-448-01	LINK-REJECT		48	4-956-874-01	BUTTON POWER	
21	A-4660-361-A	PANEL (G) ASSY, FRONT		49	4-953-059-01	E RING	
22	4-953-060-01	LEVER, SWITCH		M1	A-4660-141-A	MOTOR ASSY	
23	4-950-470-01	CUSHION-MOTOR		SW1	1-572-746-11	SWITCH, LEAF	
24	4-950-433-01	PLATTER		SW2	1-572-744-11	SWITCH, PUSH (2 KEY) (SPEED)	
25	4-950-435-01	SPACER		△SW3	1-572-744-11	SWITCH, PUSH (POWER)	
26	4-950-436-01	BUSHING-TONE ARM		△SW4	1-572-745-11	VOLTAGE SELECTOR (E)	
27	4-950-437-01	ARM-ELEVATION		△T1	1-450-508-11	TRANSFORMER, POWER	

## ELECTRICAL PARTS LIST [PS-LX52]

### NOTE:

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS  
MF :  $\mu$ F, PF :  $\mu$ μF

- PX, Saudi Arabia, Singapore and Malaysia models are identical to E model.
- Italian, EE, and CIS models are identical to AEP model.
- AUS: Australian model
- EE: East European model

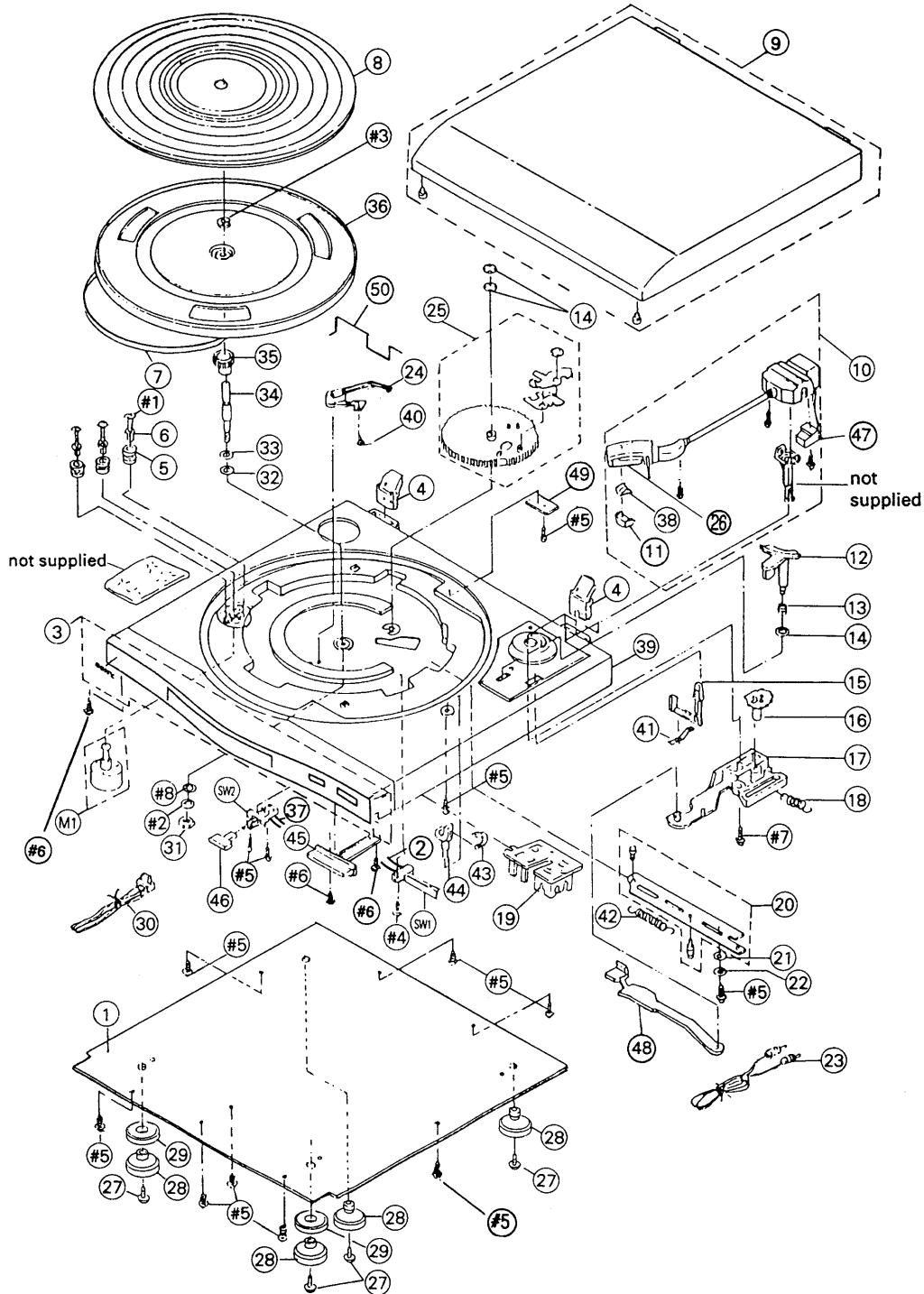
Ref.No.	Part No.	Description	Remarks	Ref.No.	Part No.	Description	Remarks
	1-639-239-11	POWER BOARD (E)		△SW4	1-572-745-11	VOLTAGE SELECTOR (E)	
	1-639-236-11	POWER BOARD (EXCEPT E)		△T1	1-450-508-11	TRANSFORMER, POWER	
	*****			*****			
		< CAPACITOR >		ACCESSORIES & PACKING MATERIALS			
				*****			
C1	1-124-360-00	ELECT 1000 $\mu$ F 20% 16V		*	4-947-532-01	SNOW BOX (L)	
				*	4-947-533-01	SNOW BOX (R)	
		< DIODE >		*	4-956-071-01	INDIVIDUAL CARTON	
D1-4	8-719-200-02	DIODE 10E-2			3-756-211-11	MANUAL, INSTRUCTION (English, French, Spanish, Portuguese) (AEP, Canadian)	
*****					3-756-211-21	MANUAL, INSTRUCTION (English) (US)	
		MISCELLANEOUS			3-756-211-41	MANUAL, INSTRUCTION (German, Dutch, Swedish, Italian) (AEP)	
		*****			3-756-211-51	MANUAL, INSTRUCTION (English, French, Spanish, Chinese) (E, AUS)	
41	1-590-871-11	CORD, CONNECTION (3 CORE)			3-756-211-61	MANUAL, INSTRUCTION (English, German, Polish, Russian) (EE, CIS)	
△42	1-590-836-11	CORD, POWER (E)		*****			
△42	1-551-294-11	CORD, POWER (AEP)		HARDWARE LIST			
△42	1-696-382-11	CORD, POWER (US, Canadian)		#1	7-685-246-19	SCREW +KTP 3X8 TYPE2 NON-SLIT	
△42	1-696-848-11	CORD, POWER (AUS)		#2	7-685-903-21	SCREW +PTPHW 3X8 TYPE2	
43	1-639-237-11	PHONE BOARD		#3	7-685-546-19	SCREW	
△46	1-693-159-11	ADAPTER, AC (E)		#4	7-685-104-11	SCREW +P 2X6 TYPE2 NON-SLIT	
SW1	1-572-746-11	SWITCH, LEAF					
SW2	1-572-744-11	SWITCH, PUSH (2 KEY) (SPEED)					
△SW3	1-572-744-11	SWITCH, PUSH (POWER)					

## EXPLODED VIEW 【PS-LX52P】

**NOTE:**

- -XX, -X mean standardized parts, so they may have some differences from the original one.
  - The construction parts of an assembled part are indicated with a collation number in the remark column.
  - Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
  - The mechanical parts with no reference number in the exploded views are not supplied.
  - Screw(# mark) list is given in the last of this parts list.
- The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety.  
Replace only with part number specified.

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-950-488-01	BOTTOM BOARD		6	4-947-504-01	COLLAR	
2	1-696-144-11	WIRE (45) RED		7	4-947-503-01	BELT	
3	A-4660-303-A	PANEL (G) ASSY, FRONT		8	A-4674-087-A	TURN TABLE MAT ASSY	
4	4-947-476-01	HINGE		9	A-4604-946-A	DUST COVER ASSY	
5	4-947-505-01	CUSHION, MOTOR					

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
10	A-4604-940-A	ARM ASSY, TONE		30	1-557-109-21	DC CORD	
11	4-948-095-01	COVER CARTRIDGE		31	4-947-510-01	NUT	
12	4-947-466-01	TONE ARM ELEVATOR		32	3-451-162-00	WASHER (56)	
13	4-947-467-01	SPRING (6)		33	3-701-445-21	WASHER	
14	4-947-514-01	4MM CS RING		34	4-947-498-01	STELL BALL	
15	4-947-468-01	LEVER, CUEING		35	4-947-497-01	GEAR	
16	4-947-470-01	ADJUST CAM		36	4-947-494-01	TURNTABLE PLATTER	
* 17	4-947-471-01	LINK, RETURN		37	1-696-143-11	WIRE (30) (WHT)	
18	4-947-472-01	SPRING (9-1)		38	4-951-290-01	STYLUS (CN234)	
19	4-956-998-01	BUTTON BASE		39	4-947-475-01	MAIN CABINET (G)	
20	A-4660-302-A	LEVER RETURN ASSY		40	4-947-496-01	SPRING (34)	
21	3-659-350-00	WASHER		* 41	4-947-477-01	CUEING (BASE)	
22	4-890-173-00	WASHER		42	4-947-485-01	SPRING (22)	
23	1-555-116-11	PHONO CORD		43	4-947-490-01	ARM CLIP	
24	4-947-495-01	WIPER REJECT		44	4-947-491-01	ARM REST	
25	A-4604-916-A	GEAR ASSY, SPUR		45	4-956-997-01	KNOB REJECT	
26	1-251-028-11	CARTRIDGE (MAIN)		46	4-956-996-01	KNOB SPEED	
27	4-950-497-01	FOOT SEAT		47	4-947-464-01	COUNTER WEIGHT	
28	4-950-490-01	PLASTIC STAND		* 48	4-947-487-01	RETURN LINK	
29	4-950-489-01	FOOT RING		49	1-644-410-11	P.C BOARD	
				50	4-948-101-01	SPRING (38)	

## ELECTRICAL PARTS LIST [PS-LX52P]

### NOTE:

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
23	1-555-116-11	PHONO CORD		<b>HARDWARE LIST</b>			
30	1-557-109-21	DC CORD					
* 49	1-644-410-11	P.C BOARD					
M1	A-4604-945-A	MOTOR ASSY					
SW1	1-570-666-11	SWITCH (MOTOR)					
SW2	1-571-089-11	PUSH SWITCH (SPEED)		#1	7-621-773-87	SCREW +B 2.6X10	
*****				#2	7-623-210-22	SW4, TYPE 2	
ACCESSORIES & PACKING MATERIALS				#3	7-624-110-04	STOP RING 6.0, TYPE-E	
*****				#4	7-685-105-19	SCREW +P 2X8 TYPE 2 NON-SLIT	
* 4-947-532-01	SNOW BOX (L)			#5	7-685-647-79	SCREW +BVTP 3X10 TYPE 2 IT-3	
* 4-947-533-01	SNOW BOX (R)			#6	7-685-646-79	SCREW +BVTP 3X8 TYPE 2 IT-3	
* 4-957-002-01	CARTON			#7	7-685-645-79	SCREW +BVTP 3X6 TYPE 2 IT-3	
*****				#8	7-688-005-01	W5, SMALL	





# PS-LX52/LX52P

## SONY<sup>®</sup> SERVICE MANUAL

US Model  
Canadian Model  
AEP Model  
E Model  
Australian Model  
PS-LX52

UK Model  
PS-LX52P

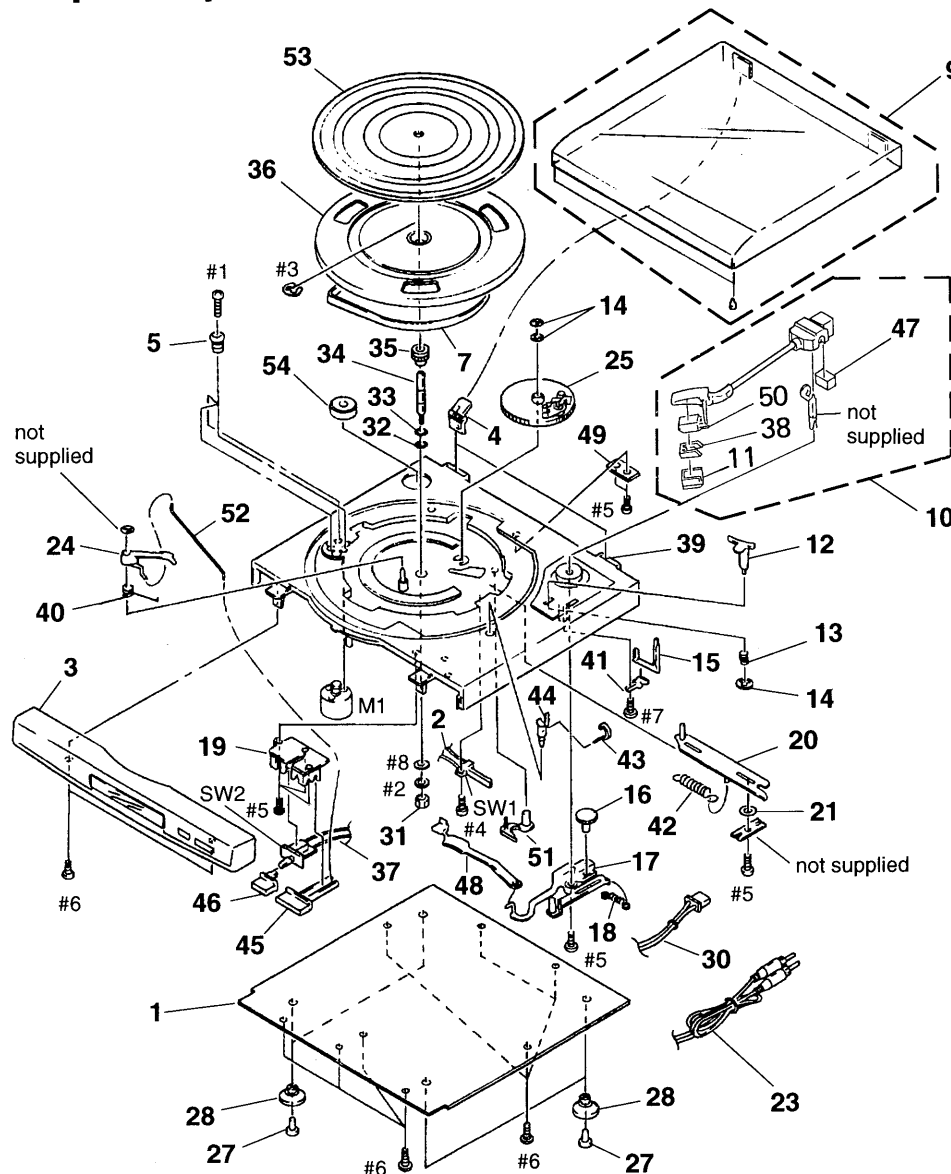
### CORRECTION-1

Correct your service manual as shown below.

Subject: Correction of EXPLODED VIEW (PS-LX52P)

(SPM-95043)

#### EXPLODED VIEW [PS-LX52P]



Note:

- Item marked "\*" are not stocked since they are seldom required for routine services. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-950-488-01	BOTTOM BOARD		36	4-947-494-01	TURNABLE PLATTER	
2	1-696-144-11	WIRE (45) (RED)		37	1-696-143-11	WIRE (30) (WHT)	
3	A-4660-303-A	FRONT PANEL ASSY		38	4-951-290-01	STYLUS (CN-234)	
4	4-947-476-01	HINGE		39	4-947-475-01	MAIN CABINET (G)	
5	4-947-505-01	CUSHION MOTOR		40	4-947-496-01	SPRING (34)	
7	4-947-503-01	BELT		41	4-947-477-01	CUEING (BASE)	
9	A-4604-946-A	DUST COVER ASSY		42	4-947-485-01	SPRING (22)	
10	A-4604-940-A	ARM ASSY, TONE		43	4-947-490-01	ARM CLIP	
11	4-948-095-01	COVER, CARTRIDGE		44	4-947-491-01	ARM REST	
12	4-947-466-01	TONE ARM ELEVATOR		45	4-956-997-01	KNOB REJECT	
13	4-947-467-01	SPRING (6)		46	4-956-996-01	KNOB SPEED	
14	4-947-514-01	4MM CS RING		47	4-947-464-01	COUNTER WEIGHT	
15	4-947-468-01	LEVER, CUEING		* 48	4-947-487-01	RETURN LINK	
16	4-947-470-01	ADJUST CAM		* 49	1-644-410-11	PC BOARD	
* 17	4-947-471-01	LINK, RETURN		50	1-251-028-11	CARTRIDGE (MAIN)	
18	4-947-472-01	SPRING (9-1)		51	4-957-000-01	PLASTIC RETURN	
19	4-956-998-01	BUTTON BASE		52	4-948-101-01	SPRING (38)	
20	A-4660-302-A	LEVER RETURN ASSY		53	A-4674-087-A	TURN TABLE MAT ASSY	
21	3-659-350-00	WASHER		54	3-701-806-00	ADAPTOR, 45	
23	1-555-116-11	CORD, PHONE		M1	A-4604-945-A	MOTOR ASSY	
24	4-947-495-01	WIPER REJECT		SW1	1-570-666-11	SWITCH (LEAF)	
25	A-4604-916-A	GEAR ASSY, SPUR		SW2	1-571-089-11	PUSH SWITCH (SPEED)	
27	4-950-497-01	FOOT SEAT		#1	7-621-773-87	SCREW (64)	
28	4-950-490-01	PLASTIC STAND		#2	7-623-210-22	WASHER (57)	
30	1-557-109-21	CORD, DC		#3	7-624-110-04	6MM E RING	
31	4-947-510-01	NUT		#4	7-685-105-01	SCREW (59)	
32	3-451-162-00	WASHER (56)		#5	7-685-647-79	SCREW (58)	
33	3-701-445-21	WASHER		#6	7-685-646-79	SCREW (60)	
34	4-947-498-01	STELL BALL		#7	7-685-645-79	SCREW (68)	
35	4-947-497-01	GEAR		#8	7-688-005-01	WASHER (69)	